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Dairy

Outlook and Situation Report

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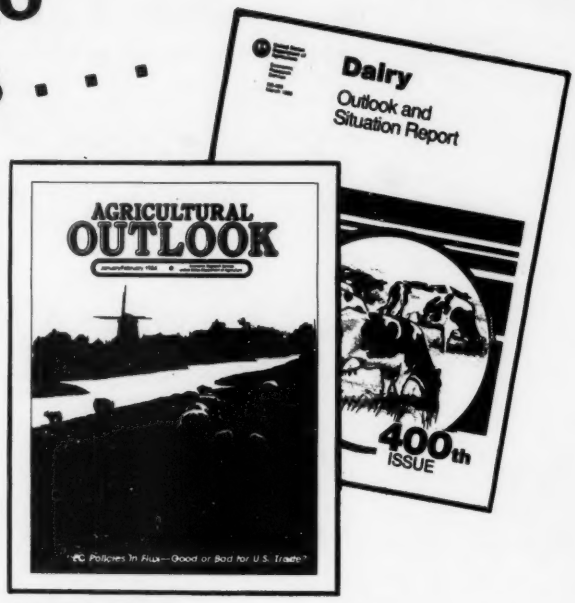

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SUMMARY

The number of milk cows on farms may increase as the diversion program ends, but the gains are likely to be limited because of tight cash flow and the expected lower support prices. For 1985, the average number of cows is projected to remain about unchanged from last year. Milk per cow is anticipated to be 1.5 to 2.5 percent larger. Calendar 1984's reduced yield due to the diversion program could be overcome in a relatively short time. Also, the underlying genetic advancement has continued and will add upward pressure on yields. Therefore, milk production in 1985 is forecast up 1 to 3 percent.

Milk production during January and February was 1.5 and 2.7 percent below a year earlier, respectively. However, after adjusting for leap year, production during February was up 0.8 percent--the result of a 1.7-percent daily average gain in output per cow and slightly less than 1 percent fewer cows. The gain in yields is likely the result of the much improved milk/feed price ratio and the upcoming end of the paid diversion program.

Milk cows on farms on January 1, 1985, numbered 10.819 million head, a 2.6-percent decline from a year earlier. Dairy heifers (500 pounds and over) held for herd replacements were 4.757 million, a 5-percent increase from January 1, 1984, and the largest January 1 number since 1965. The ratio of replacements to 100 milk cows was a January 1 record of 44.

Milk production dipped to 135.4 billion pounds in 1984, down 3 percent from 1983. This was the first decline in annual output since 1978 and the largest drop since 1973. The decrease resulted from the milk diversion program, as well as from lower average milk prices and higher feed costs. Federal order data for the first three quarters of 1984 indicate that marketings of nonparticipants also weakened as the year progressed.

Prices received by U.S. farmers for all milk during January-February averaged $13.90 per cwt, 40 cents above the same period in 1984. The all-milk price during March-June, assuming a lower support price April 1, will likely be about the same as a year earlier. The all-milk price during the summer, assuming a July 1, 1985, support price of $11.60 per cwt, will likely be 45 to 75 cents lower than a year earlier.

Reflecting lower wholesale spot prices, the Bureau of Labor Statistics' (BLS) wholesale price index for all dairy products during February was 254.1 (1967=100), down 1.3 percent since November. However, the index was still 2.3 percent above a year earlier. Last year, the index averaged 251.7, a gain of only 0.4 percent from 1983. The index for all dairy products in 1985 is expected to average 1 percent lower to 1 percent higher than last year. Meanwhile, the BLS retail dairy price index is projected to average unchanged to 2 percent larger than last year.

Preliminary data for fourth-quarter 1984 indicate commercial disappearance of all milk and dairy products, on a milkfat basis, was up 0.6 percent, following a gain of nearly 4 percent during January-September. For all of 1984, sales were up 3 percent. For 1985, commercial sales are expected to be unchanged to 2 percent higher.

USDA net removals under the milk price support program totaled 8.6 billion pounds (milkfat basis) in calendar 1984, down by nearly half from 1983. Removals were lower because of reduced marketings and increased commercial disappearance. In 1985, removals are expected to be somewhat larger than last year.

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Approved by the World Agricultural Outlook Board. Summary released Friday, March 22, 1985. The next summary of the *Dairy Outlook and Situation* is scheduled for release on Friday, September 20, 1985. Summaries of outlook and situation reports are available on several electronic information systems. For details call (402) 472–1892 or (301) 588–1572. Full reports, including tables, are provided by the system on (402) 472–1892.

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Table 1.—U.S. dairy situation at a glance

Item	Unit or base period	Quarterly data					
		4th 1982	4th 1983	1st 1984	2nd 1984	3rd 1984	4th 1984
Production and cow numbers:							
Total milk	Mil. lb	32,832	33,724	33,953	35,609	33,468	32,414
Milk per cow	Lb	2,974	3,030	3,109	3,296	3,097	2,996
Number of milk cows	Thou.	11,040	11,131	10,925	10,805	10,809	10,819
Prices received by farmers:							
All milk, sold to plants, 100 pounds	Dol	13.87	14.10	13.40	12.97	13.20	14.10
Percentage of parity 1/	Pct	63	60	58	57	57	59
Manufacturing grade milk, 100 pounds	Dol	12.97	12.87	12.40	12.13	12.30	13.07
Parity equivalent	Dol	18.86	20.26	21.17	21.32	21.32	21.23
Fat content	Pct	3.82	3.85	3.78	3.59	3.54	3.81
Minnesota-Wisconsin (3.5% fat), 100 pounds	Dol	12.58	12.40	12.06	12.08	12.37	12.63
Milk eligible for fluid market, 100 pounds	Dol	14.03	13.97	13.57	13.10	13.40	14.23
Price ratio and dairy ration value:							
Milk/16-percent feed price relationship	Lb	1.61	1.36	1.33	1.31	1.40	1.59
Value of concentrate ration fed, milk cows	Dol	7.30	8.31	8.58	8.32	8.46	7.95
Farm cash receipts from dairy products	Mil. dol	4,491	4,611	4,479	4,579	4,305	4,457
Production of factory products:							
Butter	Mil. lb	300.0	308.2	350.2	292.3	212.6	264.9
American cheese, whole milk	Mil. lb	657.5	677.3	700.0	777.2	622.0	597.7
Cheese other than American	Mil. lb	485.8	518.3	469.4	494.6	483.6	543.9
Canned milk, unskimmed	Mil. lb	181.6	176.6	144.6	173.5	158.4	154.8
Dry whole milk	Mil. lb	24.3	30.6	30.9	32.6	28.3	29.0
Frozen products 2/	Mil. gal	248.1	250.1	271.1	349.2	354.9	253.1
Creamed cottage cheese	Mil. lb	172.1	172.7	182.1	192.4	188.5	167.3
Total (milkfat basis) 3/	Mil. lb	18,468	18,920	19,967	21,281	18,362	17,511
Nonfat dry milk, human use	Mil. lb	296.8	313.2	326.1	362.1	271.5	227.1
Wholesale prices:							
Butter, Grade A, Chicago, pound	Ct	147.9	146.0	141.3	145.3	154.8	153.9
Cheese, American (40-pound blocks), f.o.b. Wisconsin assembling points, pound	Ct	140.4	139.4	135.7	135.9	139.9	140.3
Evaporated milk, case	Dol	22.02	22.23	22.23	22.23	22.23	22.23
Nonfat dry milk, pound, f.o.b. Central States, high heat	Ct	93.2	92.6	90.7	90.7	90.7	91.3
Dairy products (BLS)	1967=100	250.3	250.5	248.5	249.1	252.5	256.7
Retail prices (BLS):							
Consumer price index 4/	1967=100	293.4	303.1	306.4	309.7	313.1	315.4
All food 4/	1967=100	286.6	293.1	301.2	301.9	304.1	304.5
All dairy products 4/	1967=100	247.4	250.1	250.8	251.4	253.3	257.2
Fluid milk and cream	12/77=100	135.2	135.9	136.5	136.6	137.0	139.6
Whole milk	1967=100	221.2	222.1	223.0	223.3	223.7	228.4
Other	12/77=100	135.3	136.4	137.2	137.3	138.0	139.9
Manufactured dairy products	12/77=100	146.5	149.1	149.3	149.7	151.8	153.6
Butter	1967=100	252.4	255.0	254.2	253.6	263.9	269.0
Cheese	12/77=100	144.6	146.6	146.7	146.7	148.4	149.9
Frozen desserts	12/77=100	151.5	154.7	155.2	156.5	158.0	159.4
Other	12/77=100	141.2	145.6	146.4	147.8	148.8	151.1
Margarine	1967=100	257.5	269.1	279.6	282.9	295.3	295.3
Stocks, end of quarter:							
Creamery butter	Mil. lb	510.0	552.3	499.4	529.3	516.7	426.3
Cheese total 5/	Mil. lb	1,054.2	1,314.7	1,266.4	1,298.8	1,288.2	1,211.1
Canned milk, unskimmed	Mil. lb	104.3	94.9	47.7	54.6	91.2	103.9
Dry whole milk	Mil. lb	7.3	4.4	6.4	5.8	8.6	7.1
Total (milkfat basis) 6/	Mil. lb	20,916	24,294	22,646	23,610	23,332	20,742
Nonfat dry milk	Mil. lb	1,240.1	1,419.1	1,394.9	1,421.0	1,421.2	1,335.1
Commercial disappearance:							
Creamery butter	Mil. lb	251.0	256.6	200.3	224.8	217.7	257.1
Cheese, American	Mil. lb	529.9	545.4	557.6	591.9	575.6	577.2
Cheese, other than American	Mil. lb	596.2	609.4	527.4	554.4	568.4	626.6
Canned milk, unskimmed	Mil. lb	230.0	221.4	134.7	136.2	141.9	215.2
Milk in all products	Mil. lb	31,014	28,652	29,130	32,575	32,665	31,844
Nonfat dry milk	Mil. lb	120.1	121.6	137.0	116.7	147.5	122.1
USDA net removals:							
Butter	Mil. lb	44.6	47.5	143.3	47.2	1.5	10.7
Cheddar cheese	Mil. lb	117.1	129.5	150.6	180.9	81.0	34.8
Nonfat dry milk	Mil. lb	173.9	187.7	205.5	123.2	146.0	97.0
Evaporated milk	Mil. lb	5.3	7.5	7.6	3.6	5.1	2.8
Total (milkfat basis)	Mil. lb	2,089	2,275	4,463	2,769	842	570

1/ Seasonally adjusted prices as percentage of parity price. 2/ Ice cream, ice milk, and sherbet. 3/ Includes manufactured products for which current data are available. 4/ For all urban consumers starting January 1978. 5/ Natural plus processed American cheese held by CCC. 6/ Excludes cream and bulk condensed milk.

PRODUCTION

Expansion Returns

Milk production during January and February was 1.5 percent and 2.7 percent below a year earlier, respectively. However, average daily production (adjusted for leap year) during February 1985 was up 0.8 percent from a year earlier. The gain was the result of a 1.7-percent average daily gain in output per cow and 0.9 percent fewer milk cows. The gain in yields is likely the result of the much improved milk-feed price relationships and the approach of the end of the paid diversion program.

Of 33 States surveyed, 17 posted average daily gains in production during February from a year earlier. Of the five leading milk production States, New York (ranked third) had production 1.2 percent below the adjusted 1984 level, Minnesota (fourth) had output 0.2 percent below last year's adjusted production, while Pennsylvania (fifth) was still 0.9 percent below a year earlier. Meanwhile, Wisconsin (ranked first) and California (second) had daily average gains in total output of 3.3 and 4.8 percent, respectively.

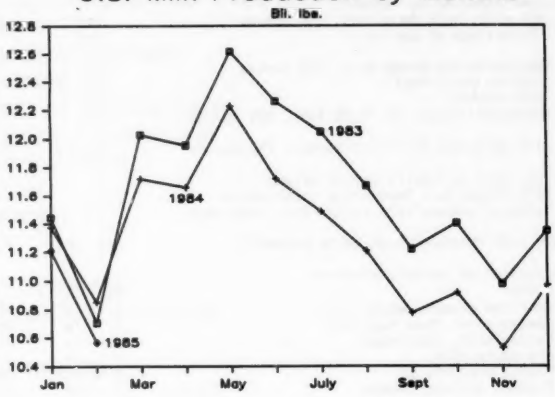
1984 Production Down 3 Percent

Milk production dipped to 135.4 billion pounds in 1984, down 3 percent from 1983. This was the first decline in annual output since 1978 and the largest drop since 1973. The decrease resulted from the milk diversion program, as well as from lower average milk prices and higher feed costs.

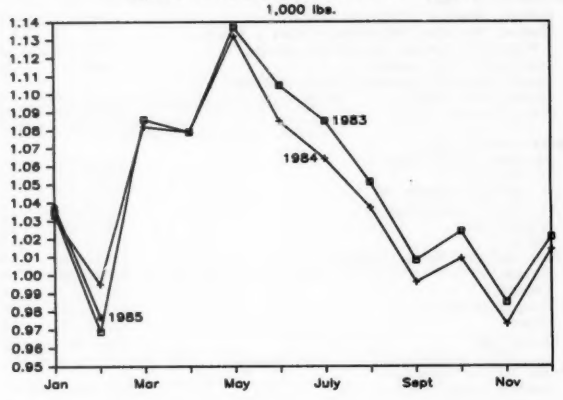
Declines from a year earlier sharpened from 2 percent (daily average basis) in the first quarter to 3 percent in the second quarter and 4 percent in the last 2 quarters. This pattern reflected both the time needed for participants in the diversion program to adjust their production and the cumulative effect of deterioration in milk-feed price relationships.

A special study of producers delivering to Federal order markets for the first 3 quarters of 1984 indicates that marketings of both participants and nonparticipants weakened as the year progressed. Marketings by participants declined 19 percent from 1983 in the first quarter, followed by drops of 24 and 25 percent in the second and third quarters, respectively. During spring and summer, a majority of participants reduced marketings more than called for in their contracts. The reductions may have allowed those participants to start rebuilding production

U.S. Milk Production by Months



Milk Production Per Cow



Milk Cows on Farms

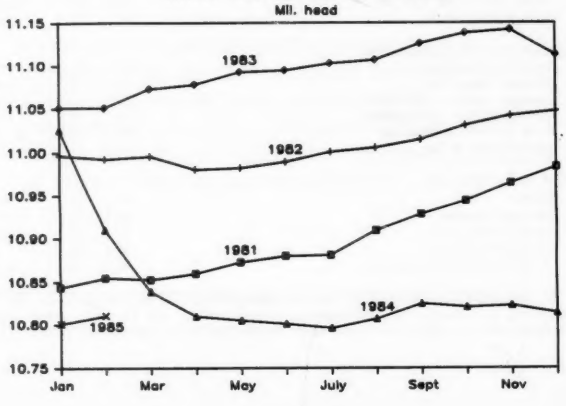


Table 2.—Milk production, milk per cow, and milk cows on farms, by months, 1978-81, with comparisons

Item	1978	1979	1980	1981	Change from year earlier			
					1978	1979	1980	1981
	----- Million pounds -----				---- Percent ----			
Milk production 1/								
January	9,958	9,954	10,311	10,803	+0.7	-0.0	+3.6	+4.8
February	9,242	9,274	9,965	10,149	-.5	+.3	+7.5	+1.8
March	10,491	10,528	10,931	11,519	-.8	+.4	+3.8	+5.4
April	10,610	10,598	11,015	11,531	-1.1	-.1	+3.9	+4.7
May	11,151	11,240	11,688	12,078	-1.8	+.8	+4.0	+3.3
June	10,817	10,945	11,325	11,552	-1.4	+1.2	+3.5	+2.0
July	10,503	10,677	11,063	11,361	-1.6	+1.7	+3.6	+2.7
August	10,182	10,404	10,784	11,106	-1.7	+2.2	+3.7	+3.0
September	9,683	9,981	10,344	10,625	-1.3	+3.1	+3.6	+2.7
October	9,780	10,060	10,451	10,763	-.4	+2.9	+3.9	+3.0
November	9,320	9,619	10,044	10,393	-.6	+3.2	+4.4	+3.5
December	9,724	10,070	10,485	10,890	-.7	+3.6	+4.1	+3.9
Total 2/	121,461	123,350	128,406	132,770	-1.0	+1.6	+4.1	+3.4
	---- Pounds ----				---- Percent ----			
Milk per cow 1/								
January	915	923	959	996	+1.8	+0.9	+3.9	+3.9
February	851	862	927	935	+.7	+1.3	+7.5	+.9
March	968	980	1,016	1,061	+.4	+1.2	+3.7	+4.4
April	982	989	1,024	1,062	+.3	+.7	+3.5	+3.7
May	1,034	1,049	1,085	1,111	-.3	+1.5	+3.4	+2.4
June	1,005	1,023	1,051	1,062	+.2	+1.8	+2.7	+1.0
July	975	997	1,025	1,044	-.1	+2.3	+2.8	+1.9
August	945	971	997	1,018	-.3	+2.8	+2.7	+2.1
September	897	930	955	972	0	+3.7	+2.7	+1.8
October	906	937	964	983	+.7	+3.4	+2.9	+2.0
November	864	896	926	948	+.5	+3.7	+3.3	+2.4
December	901	937	966	991	+.2	+4.0	+3.1	+2.6
Total 2/	11,243	11,492	11,891	12,183	+.3	+2.2	+3.5	+2.5
	----- Thousands -----				---- Percent ----			
Milk cows on farms 3/								
January	10,887	10,788	10,748	10,844	-1.0	-0.9	-0.4	+0.9
February	10,860	10,759	10,753	10,855	-1.1	-.9	-.1	+.9
March	10,834	10,738	10,755	10,853	-1.2	-.9	+.2	+.9
April	10,801	10,717	10,759	10,860	-1.5	-.8	+.4	+.9
May	10,783	10,712	10,776	10,873	-1.6	-.7	+.6	+.9
June	10,768	10,701	10,779	10,880	-1.6	-.6	+.7	+.9
July	10,768	10,704	10,788	10,881	-1.5	-.6	+.8	+.9
August	10,779	10,716	10,818	10,909	-1.4	-.6	+1.0	+.8
September	10,790	10,736	10,828	10,928	-1.4	-.5	+.9	+.9
October	10,793	10,734	10,841	10,944	-1.1	-.5	+1.0	+.9
November	10,788	10,739	10,847	10,965	-1.1	-.5	+1.0	+1.1
December	10,792	10,751	10,850	10,984	-1.0	-.4	+.9	+1.2
Annual average	10,803	10,734	10,799	10,898	-1.3	-.6	+.6	+.9

1/ Excludes milk sucked by calves. 2/ May not add because of rounding. 3/ Excludes heifers not yet fresh.

Table 3.—Milk production, milk per cow, and milk cows on farms, by months, 1982-85, with comparisons

Item	1982	1983	1984	1985 1/	Change from year earlier			
					1982	1983	1984	1985
	----- Million pounds -----				---- Percent ----			
Milk production 2/								
January	11,106	11,443	11,375	11,209	+2.8	+3.0	-0.6	-1.5
February	10,361	10,707	10,855	10,566	+2.1	+3.3	+1.4	-2.7
March	11,700	12,029	11,723		+1.6	+2.8	-2.5	
April	3/ 11,607	11,956	11,662		+.7	+3.0	-2.5	
May	3/ 12,191	12,616	12,227		+.9	+3.5	-3.1	
June	3/ 11,781	12,261	11,720		+2.0	+4.1	-4.4	
July	3/ 11,618	12,046	11,485		+2.3	+3.7	-4.7	
August	3/ 11,370	11,672	11,206		+2.4	+2.7	-4.0	
September	3/ 10,939	11,218	10,777		+3.0	+2.6	-3.9	
October	3/ 11,053	11,400	10,918		+2.7	+3.1	-4.2	
November	3/ 10,644	10,979	10,529		+2.4	+3.1	-4.1	
December	3/ 11,135	11,345	10,967		+2.2	+1.9	-3.3	
Total 4/	135,505	139,672	135,444		+2.1	+3.1	-3.0	
	---- Pounds ----				---- Percent ----			
Milk per cow 2/								
January	1,010	1,035	1,032	1,038	+1.4	+2.5	-3.0	+0.6
February	943	969	995	977	+.9	+2.8	+2.7	-1.8
March	1,064	1,086	1,082		+.3	+2.1	-.4	
April	3/ 1,057	1,079	1,079		-.5	+2.1	0	
May	3/ 1,110	1,137	1,132		-.1	+2.4	-.4	
June	3/ 1,072	1,105	1,085		+.9	+3.1	-1.8	
July	3/ 1,056	1,085	1,064		+1.1	+2.7	-1.9	
August	3/ 1,033	1,051	1,037		+1.5	+1.7	-1.3	
September	3/ 993	1,008	996		+2.2	+1.5	-1.2	
October	3/ 1,002	1,024	1,009		+1.9	+2.2	-1.5	
November	3/ 964	985	973		+1.7	+2.2	-1.2	
December	3/ 1,008	1,021	1,014		+1.7	+1.3	-.7	
Total 4/	12,306	12,585	12,495		+1.0	+2.3	-.7	
	----- Thousands -----				---- Percent ----			
Milk cows on farms 5/								
January	10,997	11,051	11,026	10,801	+1.4	+0.5	-0.2	-2.0
February	10,993	11,051	10,910	10,811	+1.3	+.5	-1.3	-.9
March	10,996	11,073	10,839		+1.3	+.7	-2.1	
April	3/ 10,981	11,078	10,810		+1.1	+.9	-2.4	
May	3/ 10,983	11,093	10,805		+1.0	+1.0	-2.6	
June	3/ 10,990	11,095	10,801		+1.0	+1.0	-2.6	
July	3/ 11,001	11,103	10,796		+1.1	+.9	-2.8	
August	3/ 11,006	11,107	10,807		+.9	+.9	-2.7	
September	3/ 11,015	11,126	10,825		+.8	+1.0	-2.7	
October	3/ 11,031	11,138	10,821		+.8	+1.0	-2.8	
November	3/ 11,042	11,142	10,823		+.7	+.9	-2.9	
December	3/ 11,047	11,113	10,814		+.6	+.6	-2.7	
Annual average	11,011	11,098	10,840		+1.0	+.8	-2.3	

1/ Preliminary. 2/ Excludes milk sucked by calves. 3/ ERS derived data consistent with published official USDA quarterly estimates. No monthly data for an individual State or region are available. 4/ May not add because of rounding. 5/ Excludes heifers not yet fresh.

Table 4.--Milk: Production by States and regions, 1982-1984, with comparisons

State and region	1982	1983	1984 1/	1983		1984	
				As percent of U.S. total	Change from year earlier	As percent of U.S. total	Change from year earlier
	Million pounds			Percent		Percent	
Maine	727	736	734	0.5	+1.2	0.5	-.3
New Hampshire	365	379	363	.3	+3.8	.3	-4.2
Vermont	2,385	2,490	2,300	1.8	+4.4	1.7	-7.6
Massachusetts	602	613	575	.4	+1.8	.4	-6.2
Rhode Island	46	45	44	(2)	-2.2	(2)	-2.2
Connecticut	644	655	610	.5	+1.7	.4	-6.9
New York	11,097	11,649	11,405	8.3	+5.0	8.4	-2.1
New Jersey	492	500	474	.4	+1.6	.3	-5.2
Pennsylvania	9,264	9,510	9,423	6.8	+2.7	7.0	-.9
Delaware	137	137	131	.1	0	.1	-4.4
Maryland	1,581	1,606	1,530	1.2	+1.6	1.1	-4.7
NORTHEAST	27,340	28,320	27,589	20.3	+3.6	20.4	-2.6
Michigan	5,253	5,528	5,350	4.0	+5.2	3.9	-3.2
Wisconsin	23,230	23,800	23,501	17.0	+2.5	17.4	-1.3
Minnesota	10,341	10,913	10,331	7.8	+5.5	7.6	-5.3
LAKE STATES	38,824	40,241	39,182	28.8	+3.6	28.9	-2.6
Ohio	4,550	4,760	4,600	3.4	+4.6	3.4	-3.4
Indiana	2,334	2,364	2,311	1.7	+1.3	1.7	-2.2
Illinois	2,657	2,706	2,629	1.9	+1.8	1.9	-2.8
Iowa	4,004	4,036	3,805	2.9	+.8	2.8	-5.7
Missouri	2,905	3,100	2,754	2.2	+6.7	2.0	-11.2
CORN STATES	16,450	16,966	16,099	12.1	+3.1	11.9	-5.1
North Dakota	1,020	1,090	1,036	.8	+6.9	.8	-5.0
South Dakota	1,762	1,829	1,691	1.3	+3.8	1.2	-7.5
Nebraska	1,340	1,415	1,215	1.0	+5.6	.9	-14.1
Kansas	1,356	1,382	1,225	1.0	+1.9	.9	-11.4
NORTHERN PLAINS	5,478	5,716	5,167	4.1	+4.3	3.8	-9.6
Virginia	2,059	2,070	1,967	1.5	+.5	1.5	-5.0
West Virginia	349	365	369	.3	+4.6	.3	+1.1
North Carolina	1,686	1,711	1,649	1.2	+1.5	1.2	-3.6
Kentucky	2,364	2,414	2,106	1.7	+2.1	1.6	-12.8
Tennessee	2,326	2,250	2,152	1.6	-3.3	1.6	-4.4
APPALACHIAN	8,784	8,810	8,243	6.3	+.3	6.1	-6.4
South Carolina	567	573	543	.4	+1.1	.4	-5.2
Georgia	1,412	1,395	1,278	1.0	-1.2	.9	-8.4
Florida	2,109	2,113	1,898	1.5	+.2	1.4	-10.2
Alabama	580	573	536	.4	-1.2	.4	-6.5
SOUTHEAST	4,668	4,654	4,255	3.3	-.3	3.1	-8.6
Mississippi	900	883	837	.6	-1.9	.6	-5.2
Arkansas	828	845	808	.6	+2.1	.6	-4.4
Louisiana	975	954	898	.7	-2.2	.7	-5.9
DELTA STATES	2,703	2,682	2,543	1.9	-.8	1.9	-5.2
Oklahoma	1,165	1,183	1,130	.8	+1.5	.8	-4.5
Texas	3,780	3,985	3,850	2.9	+5.4	2.8	-3.4
SOUTHERN PLAINS	4,945	5,168	4,980	3.7	+4.5	3.7	-3.6
Montana	341	355	345	.3	+4.1	.3	-2.8
Idaho	2,253	2,303	2,193	1.6	+2.2	1.6	-4.8
Wyoming	137	136	132	.1	-.7	.1	-2.9
Colorado	972	987	956	.7	+1.5	.7	+3.1
New Mexico	812	938	1,006	.7	+15.5	.7	+7.2
Arizona	1,202	1,237	1,222	.9	+2.9	.9	-1.2
Utah	1,162	1,171	1,039	.8	+.8	.8	-11.3
Nevada	225	237	251	.2	+5.3	.2	+5.9
MOUNTAIN	7,104	7,364	7,144	5.3	+3.7	5.3	-3.0
Washington	3,222	3,482	3,464	2.5	+8.1	2.6	-.5
Oregon	1,301	1,363	1,338	1.0	+4.8	1.0	-1.8
California	14,528	14,743	15,278	10.6	+1.5	11.3	+3.6
Alaska	14	14	14	(2)	0	(2)	0
Hawaii	144	149	148	.1	+3.5	.1	-.7
PACIFIC	19,209	19,751	20,242	14.1	+2.8	14.9	+2.5
UNITED STATES	135,505	139,672	135,444	100.0	+3.1	100.0	-3.0

1/ Preliminary. 2/ Less than 0.05 percent.

levels before the March 31, 1985, end of the diversion program.

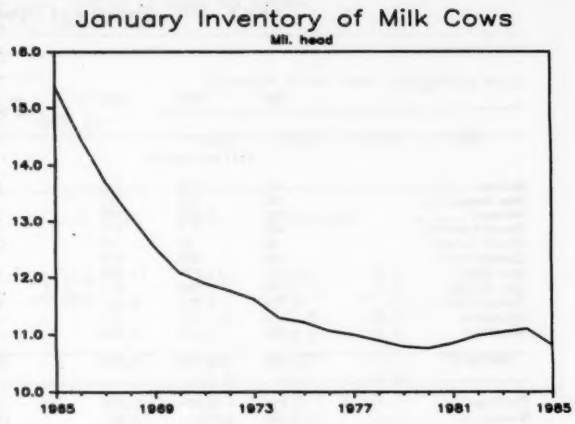
Marketings by nonparticipants eased to a 3-percent daily average increase in the first quarter of 1984, a 1-percent gain in the second quarter, and a slight decline in the third quarter. These producers were reacting to the less favorable milk-feed price relationships. Adjusted for the deductions, the effective milk-feed price ratio averaged 1.35 in 1984, the lowest since 1975. However, falling feed prices and rising milk prices late in 1984 restored this ratio to levels similar to the early 1980's.

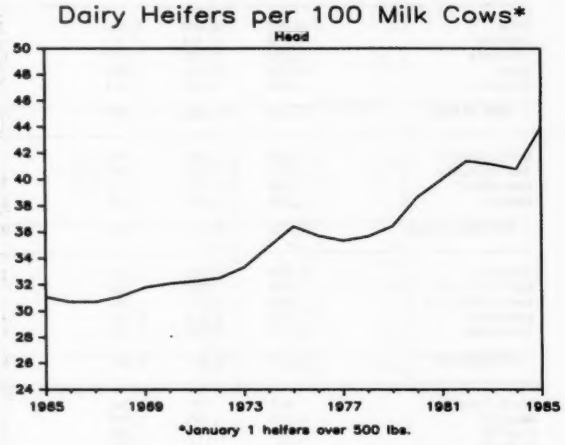
Milk cow numbers dropped rapidly between November 1983 and April 1984. Following this 3-percent decline, cow numbers slipped further through July. Despite the large replacement herd, the summer-fall buildup was much more modest than in recent years. At yearend, cow numbers were close to the April level. For all of 1984, cow numbers averaged 2.3 percent below 1983.

Output per cow totaled 12,495 pounds last year, down 0.7 percent from a year earlier. This was only the second such decline in 40 years. Most of the weakness resulted from reduced feeding and other management changes by diversion program participants. However, nonparticipants probably posted relatively small annual gains because of the less favorable milk-feed price relationships.

Milk production in 1984 was down in every region except the Pacific. The Northern Plains, Southeast, Appalachian, Delta, and Corn Belt regions posted large declines. Milk production was relatively strong in the major dairy regions, down only 2.6 percent in both the Northeast and Lake States and up 2.5 percent in the Pacific region. While regional patterns were strongly affected by differences in participation, other factors had an impact. The Northern Plains, Corn Belt, and Appalachian regions were down more than could be explained by their participation rates, while the reverse was true for the Delta, Southern Plains, and Mountain regions.

Among the 5 major dairy States, only Minnesota had a large decline (5.3 percent) in milk production. New York's output was down 2.1 percent while production in Wisconsin and Pennsylvania slipped slightly less than 1 percent. Meanwhile, California's producers turned out 3.6 percent more milk than in 1983. Only 4 of the remaining 45 States increased milk production, and they in total had less than 2 percent of national production. Nebraska, Kentucky, Kansas, Utah, Missouri, and Florida had very sharp drops.





Feed Prices Lower

The 1984/85 corn crop was 7.66 billion bushels. Corn use will likely be smaller than the crop; thus, carryover stocks will be larger. As a result, farm prices of corn will be lower in 1984/85 than a year earlier, when the market was dominated by drought and the effects of PIK. Prices at the farm are likely to range between $2.60 and $2.70 a bushel, compared with last year's season-average price of $3.25.

Table 5.--Milk cow numbers by production regions, 1982-84, with comparisons 1/

Production regions	1982	1983	1984	Change from year earlier 1983	Change from year earlier 1984
	--- 1,000 hd ---			--- Percent ---	
Northeast	2,205	2,231	2,201	+1.2	-1.3
Lake States	3,133	3,148	3,109	+0.5	-1.2
Corn Belt	1,433	1,448	1,387	+1.0	-4.2
Northern Plains	506	513	480	+1.4	-6.4
Appalachian	796	798	771	+0.3	-3.4
Southeast	427	421	389	-1.4	-7.6
Delta States	276	278	264	+0.7	-5.0
Southern Plains	440	444	427	+0.9	-3.8
Mountain	530	539	527	+1.7	-2.2
Pacific 2/	1,265	1,282	1,290	+1.3	+0.6
United States 2/	3/ 11,011	3/ 11,098	3/10,840	+0.8	-2.3

1/ Average number during the year. 2/ Includes Alaska and Hawaii. 3/ May not add to totals because of rounding.

Table 6.--Milk per cow by production regions, 1982-84, with comparisons 1/

Production regions	1982	1983	1984	Change from year earlier 1983	Change from year earlier 1984
	--- Pounds ---			--- Percent ---	
Northeast	12,399	12,694	12,537	+2.4	-1.2
Lake States	12,392	12,783	12,603	+3.2	-1.4
Corn Belt	11,479	11,717	11,607	+2.1	-0.9
Northern Plains	10,826	11,142	10,765	+2.9	-3.4
Appalachian	11,035	11,040	10,691	+0.0	-3.2
Southeast	10,932	11,055	10,938	+1.1	-1.1
Delta States	9,793	9,647	9,633	-1.5	-0.1
Southern Plains	11,239	11,640	11,663	+3.6	+0.2
Mountain	13,404	13,672	13,566	+2.0	-0.8
Pacific 1/	15,160	15,412	15,689	+1.7	+1.8
United States 1/	2/ 12,306	2/ 12,585	2/ 12,495	+2.3	-0.7

1/ Includes Alaska and Hawaii. 2/ May not add to totals because of rounding.

Last year's soybean crop was 1.86 billion bushels. Soybean use, like corn, is expected to be smaller than the crop, thus increasing carryover stocks. With additional stocks, soybean prices at the farm during 1984/85 are projected to be $5.55 to $6.25 a bushel, compared with last year's season-average price of $7.75. Prices for soybean meal (Decatur) are forecast to be between $125 and $135 a ton, down from the 1983/84 average of $188.20.

The average price paid by farmers for 16-percent protein dairy feed has in general declined since January 1984. Mid-February prices averaged $174 a ton, down $27 (13 percent) from a year earlier. With all-milk prices higher during February, the dairy farmer was able to buy 159 pounds of grain for each cwt of milk sold--up 26 pounds (20 percent) from a year earlier.

The relationship between forage supplies and demand is shifting toward a more than ample condition. For example, hay stocks on January 1, 1985, were 13 percent larger than a year earlier, while the total cattle and calf inventory declined almost 4 million head (3

Table 7.--Milk cows and replacements, 1979-84

Date	Milk cows (1,000 head)	Replacement heifers, 500 pounds and over	
		Number	Number per 100 cows
1979			
January 1	10,790	3,932	36.4
July 1	10,700	4,115	38.5
1980			
January 1	10,758	4,159	38.7
July 1	10,780	4,377	40.6
1981			
January 1	10,849	4,342	40.0
July 1	10,880	4,623	42.5
1982			
January 1	10,986	4,547	41.4
July 1	11,000	4,780	43.5
1983			
January 1	11,047	4,545	41.1
July 1	11,100	4,880	44.0
1984			
January 1	11,109	4,532	40.8
July 1	10,800	4,950	45.8
1985			
January 1	10,819	4,757	44.0

Table 8.--Milk/16-percent protein dairy feed price ratio, by months, 1981-85 1/

Month	1981	1982	1983	1984	1985
	Pounds				
Jan.	1.39	1.55	1.59	1.33	1.58
Feb.	1.39	1.54	1.56	1.33	1.59
Mar.	1.41	1.52	1.55	1.33	
Apr.	1.39	1.51	1.49	1.32	
May	1.35	1.46	1.45	1.31	
June	1.36	1.46	1.43	1.31	
July	1.40	1.47	1.45	1.34	
Aug.	1.43	1.49	1.41	1.39	
Sept.	1.48	1.56	1.36	1.48	
Oct.	1.53	1.61	1.39	1.56	
Nov.	1.56	1.62	1.36	1.62	
Dec.	1.54	1.60	1.34	1.59	
Avg.	1.44	1.53	1.45	1.41	

1/ Pounds of 16-percent protein ration equal in value to 1 pound of milk.

Table 9.--Corn, soybean meal, and 16-percent protein dairy ration prices, 1983-85

Month	Corn, No. 2, St. Louis			Soybean meal, Decatur			16-percent dairy feed		
	1983	1984	1985	1983	1984	1985	1983	1984	1985
	- - - $/bu. - - -			- - - $/ton - - -			- - - $/ton - - -		
January	2.52	3.41	2.86	179.3	201.9	135.2	175	205	177
February	2.79	3.31	2.84	177.1	184.4	125.3	177	201	174
March	2.99	3.55		177.3	196.4		175	199	
April	3.24	3.61		186.8	190.0		182	199	
May	3.24	3.58		185.8	187.4		184	197	
June	3.27	3.57		175.5	174.4		184	195	
July	3.39	3.43		189.3	157.6		182	192	
August	3.68	3.33		232.8	151.6		189	188	
September	3.60	3.09		233.6	144.9		198	184	
October	3.50	2.84		228.6	141.6		199	179	
November	3.53	2.77		224.7	135.2		205	177	
December	3.45	2.75		218.0	136.7		205	176	
Average 1/	3.27	3.27		200.7	166.8		188	191	

1/ Simple average of monthly prices.

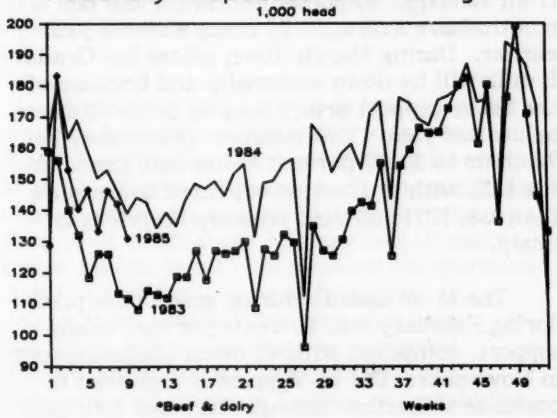
percent). In addition, prospects point to more forage and less ruminant livestock in 1985/86. The cattle herds and sheep flocks are expected to be down again on January 1, 1986, and farmers have indicated intentions to harvest additional hay acreage this year. As a result, if weather conditions are normal, 1985/86 could become a year of large hay supplies and lower prices.

January Cow Inventory Smaller; Replacements Larger

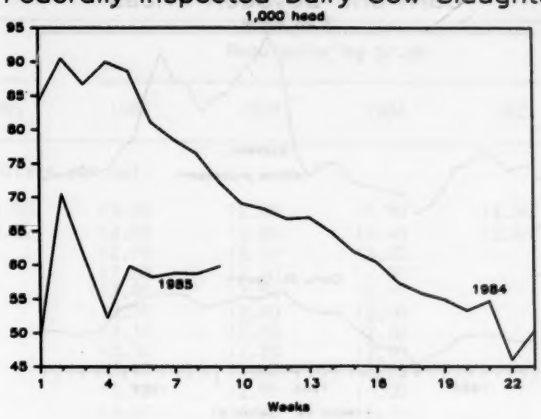
Milk cows on farms on January 1, 1985, numbered 10.819 million head, a decline of 290,000 (2.6 percent) from a year earlier, but up 19,000 from July 1, 1984. Dairy heifers (500 pounds and over) held for herd replacements were 4.757 million, an increase of 225,000 (5 percent) from January 1, 1984, and the largest January 1 number since 1965. With a gain in replacements and a decline in the milk cow herd, the number of heifers per 100 cows on January 1 was 44, the largest January 1 ratio of heifers to milk cows on record.

A record rate of culling during 1984 offset the large number of replacements available on January 1, 1984, to calve and enter the herd, hence the 290,000-head decline in the milk cow inventory last year. Federally inspected (FI) dairy cow slaughter in 1984 was about 3.2 million head, implying a total commercial kill of 3.4 million (not all kills are FI). Assuming death loss at 2 percent annually, the number of heifers that calved and entered the herd during 1984 was about 3.3 million, 73.6 percent of the January 1,

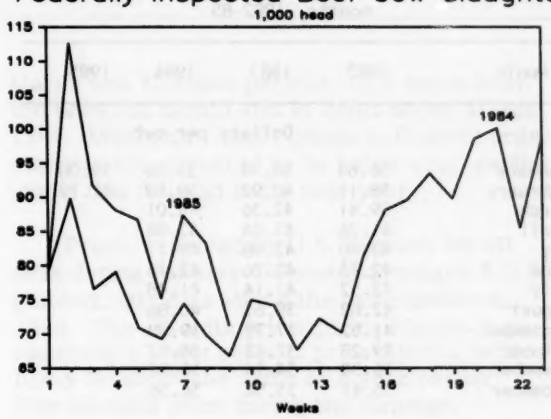
Federally Inspected Cow Slaughter*



Federally Inspected Dairy Cow Slaughter

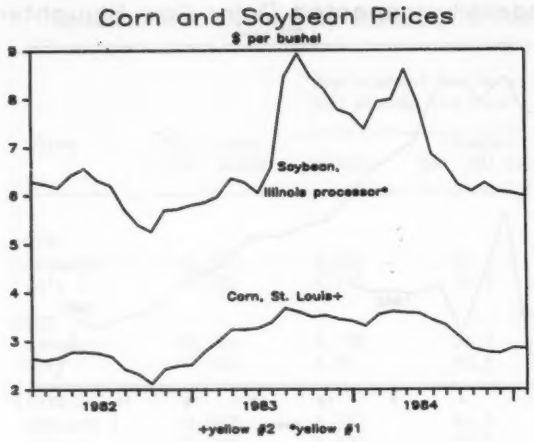


Federally Inspected Beef Cow Slaughter



1984, inventory of replacements. Using the same rate of replacement and death loss for 1983, would imply 341,000 additional dairy cows went to slaughter in 1984, when compared with 1983. However, not all of the additional dairy cow slaughter was the result of the diversion program. In fact, it seems likely that a third to a half of the extra kills last year would have occurred without the program.

Total FI cow slaughter in 1984 was 8.2 million head, implying that 5 million were beef cows. The total FI cow kill last year was nearly 1 million more than 1983. Thus, the additional dairy cows were 34 percent of extra kills in 1984. FI cow kills through March 9, 1985 (9 weeks) totaled 1.3 million head, a decline of 8.4 percent. Dairy kills are down by nearly 40 percent, while beef is up 15 percent.



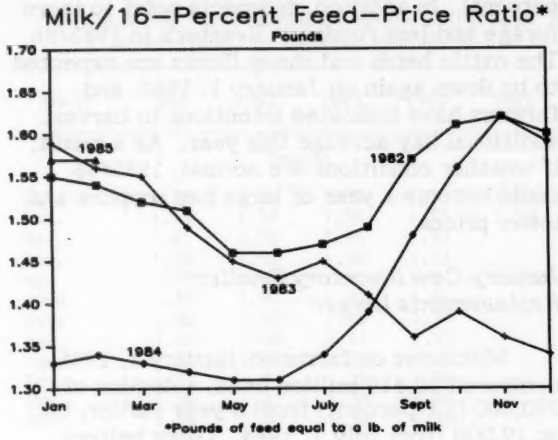


Table 10.—Utility cow prices, Omaha, by months, 1982-85

Month	1982	1983	1984	1985
		Dollars per cwt		
January	36.64	36.94	33.26	39.00
February	38.11	40.92	39.69	42.79
March	39.41	42.36	44.01	
April	41.26	43.04	42.88	
May	43.40	42.98	42.17	
June	42.73	42.26	42.16	
July	42.52	41.14	41.48	
August	42.62	39.63	40.86	
September	41.52	37.75	39.20	
October	39.28	37.42	38.57	
November	36.58	34.14	36.86	
December	35.41	33.58	36.56	
Average	39.96	39.35	39.81	

Production Will Be Larger

With low feed prices, the number of milk cows on farms may increase as the diversion program ends, but the gains are likely to be limited because of tight cash flow and the expected lower support prices. For 1985, the average number of cows is projected to remain about unchanged from last year. Milk per cow is anticipated to average 1.5 to 2.5 percent above 1984. Calendar 1984's reduced yield due to the diversion program could be overcome in a relatively short time. In addition, the underlying genetic advancement has continued and will add upward pressure on yields. For all of calendar 1985, milk production is forecast to be 1 to 3 percent greater than in 1984.

PRICES AND INCOME

Farm Milk Prices To Decline

Milk prices received by farmers in February were slightly above a year earlier, but prices are expected to be lower by midspring because of surplus supplies and the expected April 1 lower support price. Prices for the last 4 years have fallen seasonally 50 to 60 cents per cwt from February through midsummer. However, this year the drop may be in the range of $1.00 to $1.50. With supply more than ample, little price strength relative to the support price is expected. Thus, assuming a reduction in the support price on July 1 to $11.60 per cwt and assuming the price to be unchanged on October 1, milk prices during second-half 1985 may be 80 cents to $1.20 per cwt below a year earlier.

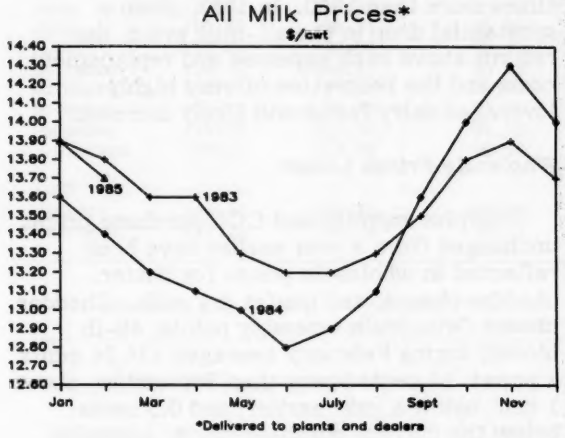
February prices for manufacturing grade milk averaged $12.60 per cwt, down 30 cents from January. Reported prices for the last 6 months have averaged 23 cents above a year earlier. During March-June, prices for Grade B milk will be down seasonally and because of the lower support prices may be 50 to 70 cents below last year. This summer, prices may be 90 cents to $1.20 per cwt below last year. In the fall, with production expected to be more than use, little upward pressure on prices is likely.

The M-W manufacturing grade milk price during February was 10 cents per cwt below support, compared with 41 cents above support in November. The M-W price is expected to continue to decline through flush and into late

Table 11.--Milk prices received by farmers, by months, 1982-85

Month	All sold to plants				Manufacturing grade			
	1982	1983	1984	1985	1982	1983	1984	1985
	Dollars per cwt							
January	14.00	13.90	13.60	14.00	13.00	12.90	12.50	12.90
February	13.80	13.80	13.40	13.80	12.80	12.80	12.40	12.60
March	13.70	13.60	13.20		12.70	12.70	12.30	
April	13.50	13.60	13.10		12.60	12.70	12.30	
May	13.20	13.30	13.00		12.40	12.50	12.10	
June	13.20	13.20	12.80		12.30	12.40	12.00	
July	13.20	13.20	12.90		12.30	12.30	12.10	
August	13.30	13.30	13.10		12.30	12.20	12.10	
September	13.60	13.50	13.60		12.60	12.50	12.70	
October	13.80	13.80	14.00		12.90	12.90	13.00	
November	13.90	13.90	14.30		13.00	13.00	13.20	
December	13.90	13.70	14.00		13.00	12.70	13.00	
Average 1/	13.59	13.57	13.42		12.66	12.63	12.47	

1/ Simple average of reported monthly prices.



summer because of the assumed lower support prices. Given the expected surplus supply of milk and dairy products, little strength relative to the support price is likely next fall.

Minimum Class I prices in Federal order markets have dropped steadily in recent months, reflecting the decline since November in the M-W price. During April, the minimum Class I price will average $14.39 per cwt, a drop of 51 cents from January and 19 cents below March, but 17 cents above the previous April. Class I prices negotiated by cooperative associations have also been declining, but not as much as minimum Federal order prices. As a result, the over-order payment in Federal orders during March was 85 cents per cwt, up 5 cents from the previous month and 26 cents above March 1984. Minimum Class I prices in Federal order markets are expected to be below year-earlier levels this fall and early next year.

Prices received by U.S. farmers for all milk during January-February averaged $13.90 per cwt, 40 cents above the same period in 1984. The all-milk price during March-June, assuming a lower support price April 1, will likely be about the same as a year earlier. The all-milk price during the summer, assuming a support price of $11.60 per cwt, is likely to be 45 to 75 cents lower.

Prices received by farmers for all milk during 1984 averaged $13.42 per cwt, 15 cents below a year earlier. The effective all-milk price (adjusted for differences in deductions) was down 23 cents. In 1985, assuming the lower support prices on April 1 and July 1 and a support of $11.60 per cwt on October 1, the all-milk price may average 20 to 50 cents lower than 1984. The effective price for 1985 would be unchanged to 25 cents lower than last year.

Cash Receipts Lower

Cash receipts during 1984 are estimated at $17.8 billion, down 5.3 percent. Based on preliminary data, farm marketings of milk and cream to plants and dealers and direct sales to consumers declined about 4.1 percent in 1984,

while the all-milk price was down about 1.1 percent.

However, both 1983 and 1984 cash receipts were impacted directly by provisions of the price-support program. From April 16 through August 31, 1983, the receipts per cwt from marketings were reduced 50 cents. During September-November 1983, there were two 50-cent-per-cwt deductions. The second deduction was refundable if a dairy farmer had made application and reduced marketings 8.4 percent or more from his average marketings during corresponding months of the 1980/81 and 1981/82 marketing years.

From December 1, 1983, until March 31, 1985, a mandatory 50-cent-per-cwt deduction on marketings was in effect and not refundable. In addition, during 1984, direct payments were made to participants in the milk diversion program who had complied with provisions of their contracts. After making adjustments to cash receipts for diversion payments and net deductions, the total effective receipts were about $18.2 billion in 1983 and about $17.7 billion in 1984, compared with $18.2 billion in 1982.

Fewer Dairy Farms; Larger Herds

The number of operations with milk cows in 1984 was reported to be 285,740, down 4.5 percent from 1983. Operations with milk cows include any place that milked a cow during the year. The number implies an average in 1984 of nearly 38 milk cows per operation (excludes heifers not yet fresh), up nearly 1 cow from a year earlier. However, not all operations are commercial dairy farms. As used here a commercial dairy operation has 5 or more milk cows. In 1982, the average commercial dairy farm had a herd of about 56 cows. Using the same proportional change in the number of operations from 1982 to 1984 would imply that the commercial dairy enterprise averaged about 60 cows during 1984.

The only State to report an increase in the number of operations with milk cows from 1983 to 1984 was Arizona. Of the five leading milk-producing States, only Pennsylvania reported no change in the number of places with milk cows, while each of the other four--Wisconsin, California, New York, and Minnesota--reported declines. The number of operations with milk cows is expected to continue to decline.

The financial condition of the dairy enterprise has deteriorated since 1980. For example, in 1984 an average 60-cow dairy enterprise with output per cow of 12,495 pounds generated a return above cash expenses and replacement costs of about $15,100. In 1981, an average 53-cow enterprise with yield per cow of 12,183 pounds had a return above cash expenses and replacement costs of nearly $23,000. This decline came despite growth in the number of cows and yield per cow for the average dairy enterprise. On January 1, 1984, the proportion of dairy farms highly leveraged (debt-to-asset ratios 40 to 70 percent) was 17.8 percent, up by nearly two-thirds from 1980. Similarly the proportion of dairy farms very highly leveraged (debt-to-asset ratios greater than 70 percent) was 8.7 percent, four times more than 1980. In 1985, given a substantial drop in the all-milk price, the returns above cash expenses and replacement costs and the proportion of very highly leveraged dairy farms will likely increase.

Wholesale Prices Lower

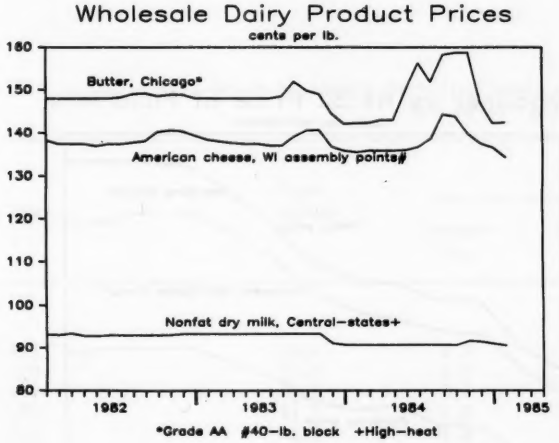
Surplus supplies and CCC purchase prices unchanged from a year earlier have been reflected in wholesale prices for butter, cheddar cheese, and nonfat dry milk. Cheddar cheese (Winconsin assembly points, 40-lb blocks) during February averaged 134.26 cents a pound, 10 cents lower than September, about 1 cent below a year earlier, and 0.5 cents below the current purchase price. Likewise, the price of nonfat dry milk (high heat, Central States area), at 90.57 cents a pound during February, was down slightly from a few months ago, a year earlier, and the support price.

Meanwhile, the price of butter (Grade A, Chicago) during February averaged 141.25 cents, even with a year earlier, but down nearly 17 cents since November and 2 cents below the support price. During 1985, assuming continued surplus supplies, lower support price on April 1, and a support reduction on July 1, the spot prices of butter, cheddar cheese, and nonfat dry milk are likely to be below year-earlier levels.

Reflecting lower wholesale spot prices, the Bureau of Labor Statistics (BLS) wholesale

Table 12.--Wholesale dairy product prices and indexes, by months, 1982-85

Year and month	Butter, Grade A, Chicago	Cheese, 40-lb blocks Wisconsin assembly points	Nonfat dry milk, Central States, high heat	Wholesale price index (all dairy products)	Fresh whole milk	Butter	Cheese	Ice cream
	- - - - Cents per lb. - - - -			- - - - - - - - - - - 1967=100 - - - - - - - - - -				
1982								
December	147.94	140.36	93.38	250.8	199.6	228.5	312.5	238.3
Average	147.69	138.27	93.15	248.9	197.9	226.9	313.3	235.9
1983								
January	147.25	139.33	93.38	250.7	199.7	226.1	315.7	238.3
February	147.25	138.38	93.38	250.9	199.9	226.4	315.0	239.7
December	143.13	136.72	91.10	248.9	199.6	221.0	309.6	240.1
Average	147.30	138.28	93.19	250.6	199.7	266.5	314.1	239.8
1984								
January	140.44	135.79	90.75	248.4	199.9	218.8	307.5	240.4
February	141.25	135.47	90.75	248.4	199.5	219.2	307.6	242.5
March	142.11	135.88	90.75	248.8	199.6	220.2	308.3	243.6
April	142.94	135.88	90.75	248.9	199.4	220.2	308.4	245.6
May	142.92	135.88	90.75	248.9	199.3	221.3	308.8	244.9
June	150.04	136.02	90.75	249.6	199.6	227.3	308.7	244.2
July	155.55	136.71	90.75	251.4	199.4	242.1	310.1	248.8
August	150.61	138.59	90.75	251.2	199.7	227.2	313.2	246.0
September	158.12	144.29	90.75	255.0	201.4	241.3	318.3	251.3
October	158.12	143.78	90.75	256.4	203.3	243.0	318.7	249.7
November	158.12	139.72	91.75	257.4	206.0	243.3	315.2	248.7
December	145.55	137.50	91.50	255.9	202.2	221.7	314.8	249.0
Average	148.81	137.96	90.90	251.7	200.8	228.8	311.6	246.2
1985								
January	141.46	136.48	90.99	255.4	206.1	217.2	314.0	249.3
February	141.25	134.26	90.57	254.1	205.3	216.8	311.8	249.5



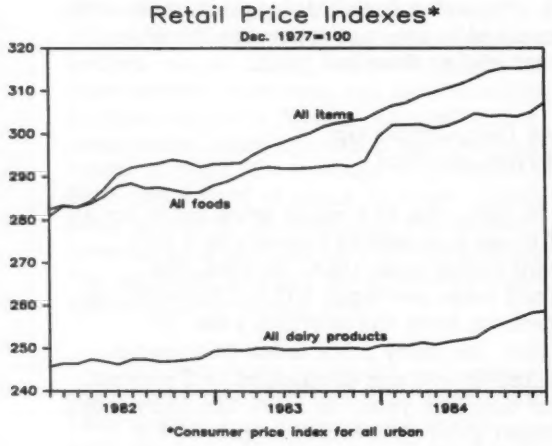
price index for all dairy products during February was 254.1 (1967=100), down 1.3 percent since November, but 2.3 percent above a year earlier. Last year, the index averaged 251.7 (1967=100), a gain of only 0.4 percent from the average for 1983. During 1984, wholesale price gains in ice cream (2.4 percent) and butter (1 percent) were above the average rate of gain, while cheese prices averaged 0.8 percent lower in 1984 than in 1983. The index for all dairy products in 1985 is expected to average 1 percent lower to 1 percent higher than last year.

Retail Dairy Prices Up Less Than All Food

In 1985, the BLS retail price index for all food items is expected to average 2 to 5 percent higher than 1984. In 1984, the all-food index averaged 302.9 (1967=100), up 3.8 percent from the previous year. In contrast, the dairy price index this year is expected to average unchanged to 2 percent larger than last year. In 1984, the dairy index averaged 253.2 (1967=100), a gain of 1.3 percent from 1983. The BLS retail dairy index in February was 3.3 percent above a year earlier, but not all of the wholesale price declines since November have been reflected at the retail counter. In addition, given the

Table 13.—Retail price indexes, for all urban consumers, by months, 1982-85

Year and month	Consumer price index	All food	All dairy products	Fluid milk and cream	Whole milk	Other fluid items	Manufactured dairy products	Butter	Cheese	Frozen desserts	Other manufactured
	- - 1967=100 - -			12/77=100	1967=100	12/77=100	12/77=100	1967=100	- - - 12/77=100 - - -		
1982											
December	292.4	286.5	247.8	135.5	221.9	135.2	146.6	252.1	144.6	151.8	141.7
Average	289.1	285.7	247.0	135.4	221.4	135.6	145.6	251.1	143.9	150.4	140.2
1983											
January	293.1	288.1	249.5	136.7	223.7	136.9	147.1	253.4	145.2	152.5	141.6
February	293.2	289.0	249.7	136.7	223.4	137.3	147.4	253.6	145.5	153.1	141.6
December	303.5	293.9	249.9	135.9	222.3	136.2	148.8	254.1	146.4	154.0	146.0
Average	298.4	291.7	249.9	136.3	222.9	136.7	148.3	254.0	146.3	153.2	144.4
1984											
January	305.2	299.4	250.8	136.4	222.7	137.3	149.3	254.7	147.0	154.8	146.1
February	306.6	302.1	250.9	136.6	223.3	137.0	149.3	253.4	146.8	155.6	146.2
March	307.3	302.2	250.8	136.5	222.9	137.3	149.2	254.4	146.3	155.3	146.9
April	308.8	302.3	251.5	136.8	223.7	137.3	149.6	252.4	146.6	156.4	148.2
May	309.7	301.4	251.0	136.5	223.0	137.3	149.4	254.2	146.2	156.6	146.8
June	310.7	302.0	251.7	136.6	223.2	137.3	150.2	254.1	147.4	156.6	148.5
July	311.7	303.2	252.2	136.7	223.3	137.5	150.8	261.2	147.9	155.8	148.3
August	313.0	304.8	252.7	136.7	223.2	137.7	151.5	264.4	148.2	157.4	148.1
September	314.5	304.2	254.9	137.7	224.7	138.7	153.1	266.0	149.1	160.9	149.9
October	315.3	304.4	256.1	138.7	226.8	139.0	153.3	268.8	149.5	160.0	150.0
November	315.3	304.1	257.2	139.8	228.7	140.0	153.3	268.7	150.1	158.1	150.9
December	315.5	305.1	258.4	140.4	229.6	140.7	154.1	269.4	150.1	160.1	152.5
Average	311.1	302.9	253.2	137.4	224.6	138.1	151.1	260.1	147.9	157.3	148.5
1985											
January	316.1	307.3	258.8	140.4	229.6	141.0	154.5	266.4	150.3	162.3	153.0
February	317.4	309.5	259.2	140.7	229.8	141.5	154.8	264.9	150.8	162.6	153.0



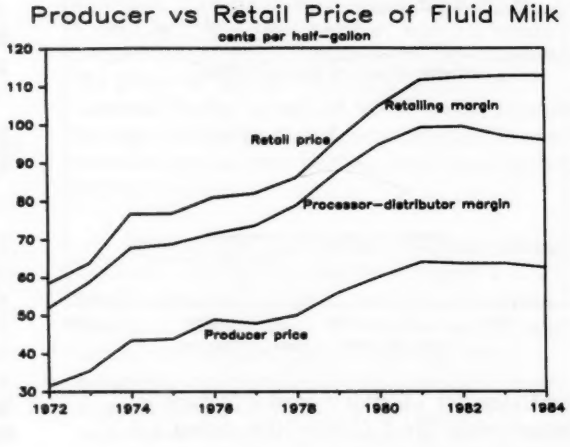


Table 14.—Retail dairy product prices, by months, 1982-85

Year and month	Milk, fresh, whole 1/	Milk, fresh, skim	Milk, fresh, lowfat	Butter, salted, Grade AA, sticks	Ice cream, prepackaged, bulk, regular	Yogurt, natural fruit-flavored
	- - - $ per 1/2 gallon - - -			$ per lb.	$ per 1/2 gallon	$ per 1/2 pint
1982						
November	1.117	.986	1.063	2.050	2.187	.507
December	1.126	.984	1.062	2.026	2.163	.513
Average	1.124	.979	1.062	2.046	2.103	.503
1983						
January	1.134	.993	1.068	2.048	2.179	.514
November	1.124	.983	1.057	2.061	2.214	.520
December	1.123	.975	1.060	2.043	2.184	.521
Average	1.128	.986	1.074	2.066	2.158	.514
1984						
January	1.124	.999	1.067	2.055	2.189	.522
February	1.122	.995	1.072	2.035	2.191	.517
March	1.121	1.000	1.068	2.057	2.171	.532
April	1.126	1.013	1.073	2.041	2.210	.542
May	1.124	1.005	1.074	2.058	2.203	.523
June	1.121	.999	1.067	2.054	2.193	.534
July	1.125	1.003	1.059	2.112	2.212	.529
August	1.118	1.018	1.054	2.136	2.232	.513
September	1.126	1.028	1.058	2.171	2.301	.524
October	1.132	1.021	1.058	2.180	2.259	.527
November	1.142	1.023	1.069	2.189	2.223	.530
December	1.142	1.041	1.082	2.201	2.231	.565
Average	1,127	1.012	1.067	2,107	2,218	.530
1985						
January	1.143	1.047	1.086	2.179	2,284	.563

1/ Vitamin fortified.

Table 15.—Grade A vitamin fortified whole milk: Farm value, marketing costs by function, and retail price per half-gallon

Year	Farm value	Marketing functions				Retail price
		Procuring	Processing	Wholesaling	Retailing	
	Cents					
1972	29.4	2.2	9.9	10.5	6.5	58.5
1973	33.2	2.5	11.6	11.6	5.1	64.0
1974	40.9	2.7	10.7	13.6	8.9	76.8
1975	41.2	2.8	11.4	13.6	7.9	76.9
1976	46.2	2.8	10.6	12.1	9.3	81.0
1977	45.1	2.9	13.2	12.6	8.3	82.1
1978	47.0	3.1	14.6	14.3	7.1	86.1
1979	52.2	3.8	15.1	16.6	8.3	96.0
1980	55.8	4.5	15.6	18.9	10.2	104.9
1981	59.5	4.7	16.0	19.1	12.4	111.7
1982	59.2	4.5	16.5	19.3	13.0	112.4
1983	59.5	4.3	15.8	17.5	15.7	112.8
1984 1/	58.2	4.4	16.7	16.6	16.8	112.7

1/ Projected on basis of data for January-September.

expected lower support prices, retail prices may decline from current levels later this year.

In 1984, retail prices for a half-gallon of Grade A vitamin fortified whole milk averaged 112.7 cents, down slightly from the average price in 1983 and only a penny higher than in 1981. In contrast, retail prices for a half-gallon of whole milk increased 8.5 cents a year during 1978-81. Although small, the drop from 1983 to 1984 was the first year-to-year decline in almost 2 decades.

The 1984 farm value was 58.2 cents, down 1.3 cents from 1983. This decline resulted from the December 1983 reduction in the support price of milk. The lower farm value pushed the farmer's share of the consumer's milk dollars below 52 cents, down a penny from 1983 and a nickel below the 1976 peak.

The combined processing and wholesaling margin in 1984 was 33.3 cents a half-gallon, unchanged from a year earlier but 2.5 cents below 1982. Retailing margins rose 1.1 cents in 1984, as declines in prices paid to processors-distributors were not reflected in retail prices. The retailing margins of 16.8 cents represented 15 percent of the retail price, up from less than 10 percent in 1980.

FEDERAL ORDER SUMMARY FOR 1984 1/

Fewer Producers, Lower Deliveries

Producers delivered 91.7 billion pounds of milk to Federal order plants in 1984, a drop of 4.1 billion pounds, or 4.5 percent, from the previous year. This decline was the program's largest annual drop and the first since 1973. This is only the fourth time Federal order deliveries have declined since annual figures were first tabulated in 1947. Both reduced producer numbers and lower deliveries per producer contributed to the drop in total receipts.

The average number of producers shipping to Federal milk order markets declined during 1984, reversing a 4-year trend of increasing producer numbers. During the year, an average of 118,900 producers delivered milk to handlers regulated under Federal milk orders, a decrease of nearly 2,200 producers from 1983's average. The drop marked a return to the long-term pattern of declining producer numbers that generally had been occurring since the early 1960's. The average daily delivery per producer showed a drop of over 60 pounds to 2,107 pounds during 1984. The decline of 2.7 percent was the largest on record and the first annual decline in average marketings since 1951.

Producer milk used in Class I or fluid milk products rose to a record 41.5 billion pounds, up 0.8 percent from 1983. The greater Class I use coupled
with lower producer deliveries resulted in a rise of 2 percentage points in the annual Class I utilization to 45 percent. This was the first increase since 1973.

During 1984, the M-W price (the basic mover of class prices in Federal orders) averaged $12.28 per cwt at 3.5-percent butterfat. This was 21 cents below the previous year's average. The M-W price was quite stable during the first half of the year, varying only 4 cents, and strengthening during the last part of the year. A similar pattern was reflected in minimum Class I prices, which averaged $14.41 for the year, a drop of 28 cents from 1983. Federal order minimum blend prices averaged $13.33, a drop of 20 cents from 1983. Estimated annual over-order payments on Class I milk rose 5 cents from 1983, averaging 63 cents per cwt. These over-order payments showed more stability during the first half of the year, ranging between 50 and 59 cents, before reaching their 81-cent high by the end of the year.

Sales of fluid milk products in Federal order marketing areas during 1984 increased almost 1 percent over the previous year and exceeded the 40 billion pounds for the first time. This rise, the largest in nearly a decade, can be attributed to a relatively small drop in sales of whole milk items, and a resumption of the strong sales of lowfat and skim milk items. The 2.6-percent drop in fluid whole milk items was among the smallest declines in the past decade, while the 5.0-percent rise in lowfat and skim milk items was the highest since 1978.

1/ Prepared by Eugene Kruger, Economic Analysis Branch, Dairy Division, Agricultural Marketing Service, USDA, (202) 447-7091.

UTILIZATION

Manufactured Output Reduced

Production of manufactured dairy products on a milkfat basis in 1984 was equivalent to about 78.5 billion pounds of milk, down 5.5 billion (6.5 percent). The decrease resulted in part from additional fluid sales, but primarily from reduced farm marketings of raw milk. The decrease in raw milk use in the manufactured products sector resulted in less butter and nonfat dry milk and American-type cheese production. Butter output in 1984 declined 13.8 percent and used 3.7 billion pounds less milk. Likewise, American-type cheese production in 1984 was down 7.9 percent and used 2.4 billion pounds less milk than a year earlier. The reduced sum of milk used to make butter and American-type cheese is greater than the total reduction in raw milk used in manufacturing because of the 700-million-pound increased use of milk to make other than American-type cheese.

Commercial Use Higher

Preliminary data for fourth-quarter 1984 indicate commercial disappearance of all milk and dairy products on a milkfat basis was up 0.6 percent, following a gain of nearly 4 percent during January-September. Sales for

Table 16.--Production of selected manufactured dairy products, 1982-84, with comparisons

Item	Units	1982	1983	1984 1/	Change from a year earlier	
					1983	1984 1/
Butter	Mil. lb.	1,257.0	1,299.2	1,120.1	+3.4	-13.8
American cheese	Mil. lb.	2,752.3	2,927.6	2,696.9	+6.4	-7.9
Other cheeese	Mil. lb.	1,789.4	1,890.8	1,991.5	+5.7	+5.3
Cottage cheese 2/	Mil. lb.	966.4	958.0	959.8	-.9	+.2
Canned milk	Mil. lb.	734.9	694.2	631.3	-5.5	-9.1
Dry whole milk	Mil. lb.	102.2	111.2	120.9	+8.8	+8.7
Ice cream	Mil. lb.	852.1	878.8	874.4	+3.1	-.5
Total milkfat basis 3/	Bil. lb.	80,583	83,992	4/ 78,500	+4.2	-6.5
Nonfat dry milk	Mil. lb.	1,400.5	1,499.9	1,186.9	+7.1	-20.9

1/ Preliminary. 2/ Creamed and lowfat. 3/ Total reported manufactured products using unrounded data. 4/ Estimated.

Table 17.--Wisconsin out-of-State milk shipments

Month	1983 1/		1984 1/		1985 1/	
	Loads 2/	Volume 3/	Loads 2/	Volume 3/	Loads 2/	Volume 3/
	Number	Thousand pounds	Number	Thousand pounds	Number	Thousand pounds
January	13	611	44	2,156	97	4,753
February	7	329	42	2,058	89	4,361
March	1	47	64	3,136		
April	1	47	75	3,675		
May	9	423	35	1,715		
June	3	141	148	7,252		
July	28	1,372	71	3,479		
August	62	3,038	236	11,564		
September	258	12,642	484	23,716		
October	57	2,793	486	23,814		
November	54	2,646	447	21,903		
December	50	2,450	254	12,446		
Total	543	26,539	2,386	116,914		

1/ Changes in marketing practices in the Chicago market and adjacent Federal order markets may affect the comparability of these data. 2/ Includes out-of-State skim milk shipments. 3/ Average weight of load increased from 47,000 pounds to 49,000 after July 1, 1983.

Table 18.--Commercial disappearance: Total milk, annual and quarters, 1982-84 1/

Item	1982			1983					1984 2/				
	Quarters			Quarters					Quarters				
	III	IV	Total	I	II	III	IV	Total	I	II	III	IV	Total
	Billion pounds												
Production	34.0	32.8	135.5	34.2	36.8	34.9	33.7	139.7	34.0	35.6	33.5	32.4	135.4
Farm use	.6	.6	2.4	.6	.6	.6	.6	2.3	.8	.6	1.1	1.1	3.6
Marketings	33.3	32.2	133.1	33.6	36.2	34.3	33.1	137.3	33.1	35.0	32.3	31.3	131.8
Beginning commercial stocks	5.0	4.6	5.4	4.6	5.2	5.3	5.2	4.6	5.2	5.3	5.6	5.2	5.2
Imports	.6	.9	2.5	.6	.5	.6	.9	2.6	.6	.6	.7	.8	2.7
Total supply	39.0	37.7	141.0	38.8	42.0	40.2	39.2	144.5	38.9	41.0	38.7	37.4	139.8
Ending commercial stocks	4.6	4.6	4.6	5.2	5.3	5.2	5.2	5.2	5.3	5.6	5.2	4.9	4.9
Net removals	2.6	2.1	14.3	5.6	5.8	3.1	2.3	16.8	4.5	2.8	.8	.6	8.6
Commercial disappearance (actual)	31.8	31.0	122.1	28.1	30.9	32.0	31.7	122.5	29.1	32.6	32.7	31.8	126.2
Percent change 3/	+0.3	+1.5	+1.5	-2.1	+0.3	+0.7	+2.1	+0.3	4/+2.8	+5.5	+2.2	+0.6	+3.0

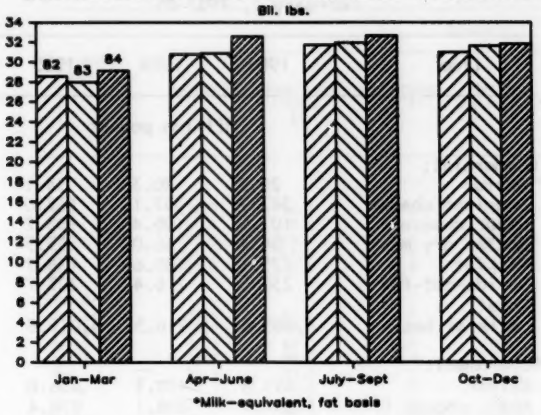
1/ Milkfat basis. Totals may not add because of rounding. 2/ Preliminary. 3/ From year earlier, using unrounded data. 4/ On a daily average basis.

Table 19.--Commercial disappearance: Selected manufactured dairy products, 1979-84 1/

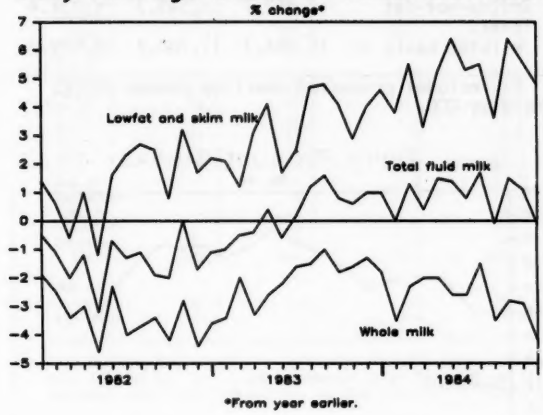
Year and quarter	Butter 2/	Cheese		Nonfat dry milk	Canned milk	Frozen products 4/
		American 3/	Other			
	Million pounds					Million gallons
1979	895.0	2,113.1	1,730.4	603.1	773.7	1,152.1
1980	878.8	2,023.9	1,827.9	538.9	732.5	1,166.9
1981	869.2	2,147.9	1,875.6	464.1	750.4	1,167.7
1982-1st Qtr.	211.4	541.3	462.9	105.0	170.6	249.6
2nd Qtr.	217.6	546.1	484.5	75.5	150.1	334.3
3rd Qtr.	217.3	549.4	501.0	147.1	164.7	346.2
4th Qtr.	251.0	528.0	596.2	120.1	230.0	248.1
Total	897.3	2,165.0	2,044.6	447.7	715.3	1,178.2
1983-1st Qtr.	209.5	466.9	494.6	109.6	160.8	264.4
2nd Qtr.	198.6	570.7	508.3	106.4	159.0	340.3
3rd Qtr.	217.0	500.2	521.1	122.4	144.5	366.4
4th Qtr.	256.6	545.4	609.4	121.6	221.4	250.1
Total	881.7	2,083.2	2,133.3	459.9	685.8	1,221.3
1984-1st Qtr. 5/	200.3	557.6	527.4	137.0	134.7	271.1
2nd Qtr. 5/	243.8	591.9	554.4	116.7	136.2	349.2
3rd Qtr. 5/	217.7	575.6	568.4	147.5	141.9	354.9
4th Qtr. 5/	257.1	577.2	626.6	122.1	215.2	253.1
Total 5/	918.9	2,302.3	2,276.8	523.4	627.1	1,228.3

1/ Total may not add because of rounding. 2/ Imports include butter-equivalent of butteroil. 3/ Imports include Colby cheese; stocks do not include processed cheese. 4/ Excludes Mellorine. 5/ Preliminary.

Commercial Use of All Milk Products*



Daily Average Sales of Fluid Milk Items



all of 1984 are currently estimated up 3 percent. For 1985, commercial sales are expected to be unchanged to 2 percent higher.

A comparison of commercial disappearance of major dairy products during 1984 with a year earlier indicates that butter was up 4.2 percent; American-type cheese, 10.5 percent; cheese other than American, 6.7 percent; frozen dairy products, 0.6 percent; fluid products, 0.8 percent; and nonfat dry milk, 13.8 percent. Meanwhile, canned milk sales were again lower, down 8.6 percent.

Per Capita Use Higher

Civilian per capita domestic disappearance (including USDA donations) increased 6 pounds to 582 on a milkfat basis during 1984. An increase in per capita commercial sales overcame the reduced USDA donations to make the gain. Per capita disappearance of fluid milk and cream (milkfat basis) during 1984 was unchanged while both American-type and other than American-type cheese posted gains. Butter and ice cream were down slightly. Meanwhile, nonfat dry milk per capita disappearance was down sharply, but this result is suspect because of the large gains in sales during 1984.

During 1984, domestic disappearance from USDA sources totaled 269 million pounds

Table 20.--Per capita civilian consumption of selected dairy products, 1970-84

Year	Milkfat basis	Fluid milk and cream 1/	Butter	American cheese	Other cheese	Canned milk	Ice cream	Whole dry milk	Nonfat dry milk
				Pounds					
1970	561	263	5.3	7.1	4.4	5.9	17.6	.2	5.3
1971	556	259	5.1	7.4	4.7	5.7	17.5	.2	5.3
1972	558	262	4.9	7.8	5.3	5.1	17.3	.1	4.6
1973	551	255	4.8	7.9	5.7	4.8	17.3	.1	5.3
1974	539	243	4.5	8.6	6.0	4.4	17.4	.1	4.2
1975	540	243	4.7	8.2	6.1	3.9	18.5	.1	3.3
1976	540	242	4.3	9.0	6.7	3.7	17.9	.2	3.5
1977	542	239	4.3	9.3	6.8	3.2	17.5	.2	3.3
1978	545	235	4.4	9.6	7.4	3.1	17.4	.2	3.1
1979	548	232	4.5	9.6	7.6	3.0	17.1	.3	3.3
1980	544	227	4.5	9.7	7.9	2.8	17.4	.3	3.0
1981	542	222	4.3	10.3	8.1	2.9	17.2	.2	2.6
1982	560	216	4.6	11.5	8.6	2.8	17.5	.1	2.7
1983 2/	577	215	5.1	11.6	9.0	2.7	17.9	.1	3.0
1984 2/	582	215	5.0	12.2	9.5	2.4	17.6	.1	2.4

1/ Milkfat basis. 2/ Preliminary.

of butter, down 11 percent from 1983. Cheese donations totaled 594 million, a decline of 10 percent. Canned milk at 19 million was 23 percent less than in 1983, while nonfat dry milk domestic give aways, as currently estimated, were sharply lower. On a milkfat basis, the donations equaled 11.5 billion pounds of milk in 1984, down from 12.9 billion the prior year.

USDA Stocks Lower

Stocks held by USDA on February 1 were equivalent to 10.6 billion pounds of milk (milkfat basis), down 7.1 billion (40 percent) from a year earlier. Holdings by the Government have fallen sharply since June 1, 1984, due to the reduced amount of purchases relative to the amount of program uses. Government stocks are not likely to decline from current levels, given the projected program uses and the expected increase in removals this year.

USDA holdings of cold-storage butter on February 1 were 236 million pounds, a decline of 234.3 million (50 percent) from a year earlier. Meanwhile, American cheese stocks (including processed American) held by USDA in cold storage were 578 million pounds, a drop of 230 million (28 percent).

Stocks held by the trade on February 1 were equal to about 5 billion pounds of milk (milkfat basis), a drop of 200 million from 1 year earlier. The trade held 34 million pounds of butter, about 6 million less than last year. They had also reduced their total stocks of cheese by about 7 million pounds from February 1, 1984.

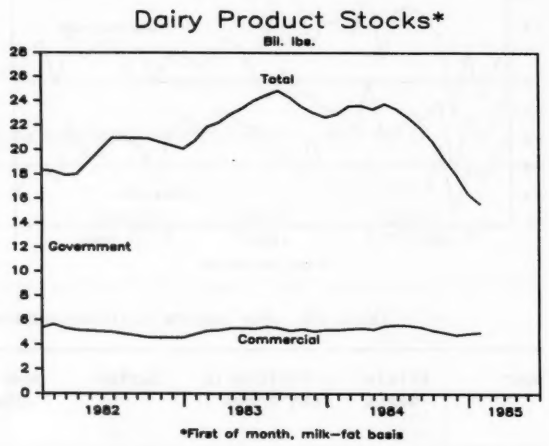
CCC Purchases Equal to a Year Earlier

USDA net removals (delivery basis) under the milk price-support program totaled 8.6 billion pounds (milkfat basis) in calendar 1984, down by nearly half from 1983. Removals were lower because of reduced marketings (lower production and additional farm use) and increased commercial disappearance. However, during February 1985, USDA net removals under the program were equivalent to 1.4 billion pounds of milk, the same as 1 year earlier. In 1985, removals are expected to be somewhat larger than last year.

Table 21.--Dairy product stocks, February 1, 1983-85

Item	1983	1984	1985
	Million pounds		
Commercial:			
Butter	29.7	40.3	34.1
American cheese	347.7	357.1	352.0
Other cheese	101.9	105.4	103.2
Nonfat dry milk	84.4	66.0	55.5
Milkfat	173.1	185.6	178.2
Solids-not-fat	230.3	216.4	203.7
Total, milkfat basis	4,883.6	5,216.5	5,019.8
Government:			
Butter	455.8	470.3	236.0
Amer. cheese 1/	651.9	808.1	578.4
Nonfat dry milk	1,207.6	1,347.3	1,094.8
Milkfat	576.9	638.9	376.3
Solids-not-fat	1,362.7	1,545.3	1,231.4
Total, milkfat basis 1/	15,854.3	17,700.2	10,589.0

1/ Includes processed American cheese stocks held by CCC.



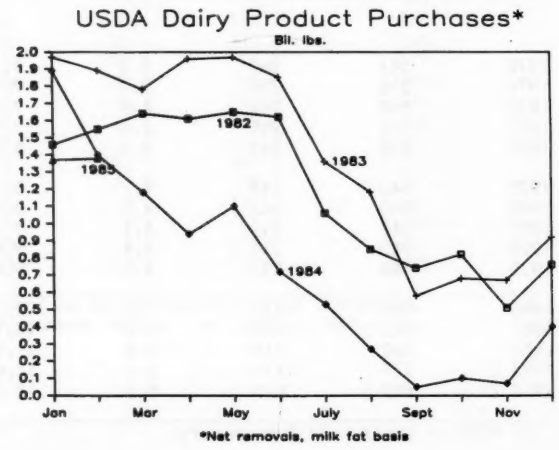


Table 22.--Dairy products removed from the commercial market by programs of the USDA, 1978-85

Year and month	Removals 1/					Solids content of removals			
	Butter 2/	American cheese 3/	Evaporated milk 4/	Nonfat dry milk 5/	Milk equivalent	Milkfat	Solids-not-fat	As a percentage of marketings	
								Milkfat	Solids-not-fat
	Million pounds							Percent	
1978	112.0	39.7	17.6	285.0	2,743	106.3	290.7	2.4	2.8
1979	81.6	40.2	16.4	255.3	2,119	81.7	261.8	1.8	2.5
1980	257.0	349.7	17.5	634.3	6,800	325.3	723.6	7.1	6.7
1981	351.5	563.0	18.6	851.3	12,861	471.7	999.2	9.9	8.9
1982	382.0	642.5	20.8	948.1	14,282	522.7	1,117.5	10.7	9.8
1983 6/									
January	66.6	60.1	2.1	81.8	1,973	73.7	98.2		
February	59.2	67.3	1.4	83.9	1,891	70.0	102.3		
March	46.7	82.3	1.9	106.0	1,782	65.0	128.1		
April	53.2	86.3	2.4	95.9	1,958	71.5	119.8		
May	55.5	83.0	1.7	111.8	1,971	72.3	134.0		
June	40.1	102.8	.8	123.7	1,847	66.3	151.2		
July	23.4	87.9	1.9	102.9	1,356	48.0	126.6		
August	16.6	84.2	1.8	104.0	1,179	41.3	126.5		
September	4.3	49.2	3.0	63.4	583	20.0	76.7		
October	18.1	30.6	2.8	62.4	681	25.1	70.1		
November	10.4	46.0	2.1	62.0	674	23.8	74.3		
December	19.0	52.9	2.6	63.2	920	33.0	77.7		
Total 7/	413.2	832.8	24.6	1,061.0	16,814	610.2	1,285.7	12.2	10.9
1984 6/									
January	61.2	62.5	3.3	76.2	1,889	70.2	93.8		
February	47.2	42.4	2.3	64.0	1,398	52.3	75.5		
March	34.8	45.7	2.1	65.1	1,176	43.4	77.4		
April	19.2	55.0	1.8	71.1	944	33.8	85.9		
May	23.3	63.1	.8	86.8	1,105	39.7	103.3		
June	4.8	62.8	.9	72.3	720	24.7	89.1		
July	1.6	49.9	1.2	64.3	529	17.9	77.5		
August	2.3	21.8	1.8	52.3	267	9.4	57.4		
September	-2.4	9.3	2.0	29.4	46	1.4	31.5		
October	-.3	10.7	1.7	36.9	102	3.6	39.1		
November	.5	6.0	.2	24.1	70	2.5	25.1		
December	10.5	18.1	.8	36.0	397	14.6	40.5		
Total 7/	202.6	447.3	19.0	678.4	8,644.7	313.4	795.8	6.5	7.0
1985 6/									
January	49.9	34.6	.9	58.8	1,375	51.8	67.9		
February	44.6	46.1	3.6	54.9	1,384	51.4	68.1		

1/ Delivery basis, after unrestricted domestic sales. 2/ Includes butter-equivalent of anhydrous milkfat, PIK, and purchases under Sec. 709 and 4a. 3/ Includes purchases under Sec. 709 and 4a. 4/ Includes purchases under 4a. 5/ Includes PIK certificates and purchases under Sec. 709 and 4a. 6/ Preliminary. 7/ Totals may not add because of rounding.

Table 23.--Uncommitted CCC inventories, selected dates, 1982-85

Date	Butter	American cheese	Nonfat dry milk	Total milkfat basis
	Million pounds			Billion pounds
Mar. 1, 1982	306.2	584.6	920.3	12.1
Mar. 1, 1983	427.5	746.4	1,178.0	16.2
Mar. 1, 1984	407.8	840.8	1,367.2	16.7
Sept. 1, 1984	254.4	813.0	1,246.1	13.3
Jan. 1, 1985	186.9	602.3	1,120.2	9.8
Feb. 1, 1985	101.1	581.4	1,065.4	7.8
Mar. 1, 1985	122.5	542.1	998.1	7.9

FOREIGN TRADE AND TRENDS

Imports and Exports Larger

During 1984, reported imports of dairy products equaled 2.7 billion pounds of milk on a milkfat basis, up nearly 5 percent from the previous year. The imports were 2 percent of total U.S. milk production. Census Bureau data indicate that imports of quota dairy products were equal to 2,258 million pounds of milk (milkfat basis), slightly more than the annual quota of 2,234 million--the second year that this has occurred. In addition, a number of items were reported at above-quota levels in 1984. Given that the USDA and U.S. Customs Service strictly control quota imports, there apparently has been an error in the data reported by the Census Bureau.

Table 24.--Dairy products: U.S. imports, quota and nonquota, total 1980-84

Product	Calendar year quota	1980	1981	1982	1983	1984 1/	Change from year earlier 1983	Change from year earlier 1984
	Thousand pounds						Percent	
Cheese, quota types								
American								
-cheddar	12,205.3	10,710	12,099	4/ 12,682	4/ 12,746	4/ 13,835	+0.5	+8.5
-other	7,545.4	7,367	4/ 7,842	5,163	4/ 8,909	4/ 10,234	+72.6	+14.9
Italian								
-original loaves	12,374.4	5,998	7,840	12,139	12,121	12,168	-0.1	+0.4
-other	1,550.0	1,059	619	1,436	1,537	1,488	+7.0	-3.2
Edam and Gouda								
-natural	9,208.6	8,572	9,029	8,459	8,967	9,172	+6.0	+2.3
-processed	3,151.3	2,019	3,088	2,955	3,077	3,121	+4.1	+1.4
Blue mold	5,469.6	4,388	5,095	5,096	4/ 5,603	5,317	+9.9	-5.1
Swiss								
-Emmenthaler	70,278.1	66,608	66,116	67,193	68,441	69,473	+1.9	+1.5
-Gruyere process	16,479.0	14,060	13,300	14,848	15,693	16,335	+5.7	+4.1
Other								
-over 0.5% fat	89,466.8	67,370	77,337	87,996	4/ 90,417	4/ 92,209	+2.8	+2.0
-under 0.5% fat	12,621.1	7,194	10,110	12,249	12,145	12,481	-0.8	+2.8
Total	240,349.6	195,345	212,475	230,216	239,656	4/ 245,833	+4.1	+2.6
Cheese, nonquota types								
Other cow's milk cheeses 2/		12,200	12,463	14,724	18,399	23,993	+25.0	+30.4
Miscellaneous 3/		905	894	1,201	1,479	2,015	+23.1	+36.2
Pecorino		21,433	20,615	22,291	25,703	33,074	+15.3	+28.7
Roquefort		1,278	1,214	910	1,010	1,104	+11.0	+9.3
Total		35,816	35,187	39,127	46,591	60,186	+19.1	+29.2
Total cheese,								
Quota and nonquota	240,349.6	231,161	247,661	269,343	286,247	306,019	+6.3	+6.9
Other quota products								
Butter	707.0	586	4/ 1,827	4/ 1,746	4/ 1,724	4/ 1,766	-1.3	+2.4
Butteroil	1,200.0	1,200	1,200	1,200	1,200	1,200	0	0
Butterfat mixtures	2,580.0	4/ 2,676	1,204	2,335	2,334	4/ 3,063	-0.0	+31.2
Ice cream	3,377.3	1,174	0	0	0	131	0	5/
Frozen cream	12,540.0	9,849	12,413	4/ 15,133	4/ 14,179	11,764	-6.3	-17.0
Nonfat dry milk	1,807.0	4/ 4,890	4/ 2,751	4/ 1,935	4/ 2,399	4/ 2,145	+24.0	-10.6
Dried buttermilk and whey	496.0	4/ 498	383	355	400	117	+12.7	-70.7
Evaporated milk	1,312.0	1	4/ 4,954	4/ 4,036	4/ 7,181	4/ 5,840	+77.9	-18.7
Condensed milk	4,079.0	418	586	3,129	3,763	4,040	+20.3	+7.4
Chocolate crumb								
-regular	21,409.2	14,480	11,691	18,825	16,240	13,393	-13.7	-17.5
-lowfat	4,680.0	1,888	1,026	740	1,252	70	+69.2	-94.4
Animal feed with milk solids	16,300.0	14,487	15,622	15,948	15,060	14,849	-5.6	-1.4
Nonquota products								
Casein		151,226	127,823	176,752	159,527	192,312	-9.7	+20.6
Lactose		3,044	2,381	1,050	1,055	1,540	+0.5	+46.0
Total all products, milkfat basis	2,234,270	2,108,723	2,329,206	2,476,760	4/ 2,615,583	4/ 2,741,430	+5.6	+4.8

1/ Preliminary. 2/ Primarily soft, ripened cheeses. 3/ Gjetost, Bryndza, Gammelost and Noekkelost, and Goya. 4/ Probable error in reported data. 5/ More than 1,000.

Source: U.S. Department of Commerce, Bureau of the Census.

Exports during 1984 were equal to about 2.9 billion pounds of milk (milkfat basis), up 38 percent from the previous year. Exports were slightly larger than imports, a switch from 1983, but a return to the situation that existed in 1981 and 1982.

World Milk Production Unchanged in 1985

Cow's milk production during 1985 in the 38 major dairy countries is forecast to equal the 1984 level. Milk output is likely to be up in New Zealand and Australia but down in the EC. In 1984, world milk production was about 409 million metric tons, down slightly from the record 411.2 million produced in 1983.

With somewhat more milk expected to be consumed in fluid products, the use of milk for the manufacture of dairy products is projected to decline slightly. The shift to producing more cheese and less butter and nonfat dry milk, so apparent in the 1970's and early 1980's, appears to have resumed. Butter output is forecast to be 2 percent lower and nonfat dry milk production 4 percent lower. Meanwhile, cheese production is expected to be up 2 percent.

Cheese prices on international markets, through relatively weak in terms of the strong U.S. dollar, are quite stable compared to butter and butteroil prices, which have dropped sharply since last fall. Butter prices are currently being reported at $950–$1,050 per metric ton, a decline of about $300, and below the General Agreement on Taffiffs and Trade (GATT) minimum of $1,200. The outlook for nonfat dry milk price and world

demand for the powder this year are expected to be firm.

World stocks of dairy products, which had expanded to burdensome levels at the end of 1983, are expected to be down sharply by the end of this year. Both the European Community (EC) and the U.S. have cut milk output from 1983 levels as well as increased foreign feeding programs. The EC expects a substantial increase in commercial exports of the major dairy products in 1985.

Table 25.--U.S. dairy trade, 1/ 1983-84

Year and quarters	Imports		Exports	Shipments 2/
	Cheese	Other		
	Million pounds			
1983				
1st	512	121	508	152
2nd	493	45	623	158
3rd	532	44	379	130
4th	736	132	614	136
Year 3/	2,273	343	2,124	577
1984				
1st	465	104	487	175
2nd	548	63	827	174
3rd	668	59	1,065	171
4th	753	82	559	114
Year 3/	2,434	307	2,938	634

1/ Milk-equivalent, fat basis. 2/ To U.S. territories. 3/ May not add because of rounding.

Table 26.--Dairy product imports, 1970-84 1/

Year	Yearly quota 2/	Imports subject to quota	Imports not subject to quota	Total
	Million pounds			
1970	946	841	1,033	1,874
1971	973	776	580	1,356
1972	1,166	1,023	671	1,694
1973	3,608	3,263	596	3,859
1974	2,293	1,968	955	2,923
1975	1,306	976	693	1,669
1976	1,306	1,037	906	1,943
1977	1,306	1,119	849	1,968
1978	1,306	1,226	1,084	2,310
1979	1,306	1,235	1,070	2,305
1980	2,231	1,820	289	2,109
1981	2,234	2,061	268	2,329
1982	2,234	2,163	314	2,477
1983	2,234	3/2,243	373	3/2,616
1984	2,234	3/2,258	483	3/2,741

1/ Milk-equivalent, fat basis. 2/ Includes temporary quotas authorized in 1973 and 1974. 3/ Probable error in reported data.

The Effects of Various Dairy Support Price Alternatives

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Abstract: Three scenarios of a dairy sector model are simulated through 1987 to examine some of the implications of the effects of alternative price support levels. Results indicate that rising milk cow inventories and production per cow will again lead to production increases near or exceeding increases in commercial disappearance, unless price supports are substantially reduced. Consequently, in the absence of substantial price support reductions, net Government removals of dairy products would be expected to remain large and could begin trending upward again.

Keywords: Dairy, price support, net Government removals, econometric model, simulations, scenarios.

Net Government removals of dairy products rose each year from 1979/80 through 1982/83, reaching 16.6 billion pounds (milk-equivalent, fat basis) in 1982/83. About $2.5 billion in net Government expenditures were needed for the dairy support program in 1982/83. To address this growing problem, the Dairy and Tobacco Adjustment Act of 1983 provided incentives to bring dairy marketings more in line with consumption. The new law lowered the support price by 50 cents per cwt; had provisions for additional support reductions in 1985; mandated a 50-cent-per-cwt deduction on milk marketed from December 1983 through March 1985; mandated a 15-cent-per-cwt deduction for product promotion, research, and nutritional education; and had a voluntary 15-month dairy paid diversion program that started on January 1, 1984. Although this law helped reduce 1983/84 removals to 10.4 billion pounds and expenditures to $1.5 billion, lower milk prices and higher feed costs also were important factors, especially among nonparticipating producers (1).

With the diversion program and the 50-cent-per-cwt deduction ending on March 31, 1985, there are a number of policy alternatives that might be considered, such as direct payments, supply management, paid diversion, reduced support levels, or no support program. The major policy instrument considered in this paper is the dairy support price. Support for manufacturing grade milk was set at $12.60 per cwt on December 1, 1983, and will remain at that level until October 1, 1985. However, if on April 1, 1985, the Secretary of Agriculture estimates that projected CCC purchases for the following 12 months will exceed 6 billion pounds, milk equivalent, the support price could be reduced by 50 cents per cwt. Further, a second 50-cent-per-cwt cut in the support level could be made on July 1, 1985, if purchases for the next 12 months are projected to exceed 5 billion pounds.

This paper uses a small econometric model of the dairy sector to examine some of the implications of three price support policy alternatives, ranging from leaving the price support unchanged at $12.60 per cwt to lowering the price support to $10 per cwt. The analysis is conducted on a quarterly basis and extends through calendar 1987. Although the simulation results presented here differ somewhat from the official USDA projections, which are a composite of a number of model and judgmental forecasts, the model is a useful tool for comparing results of alternative scenarios. Results indicate that without a substantial decline in the price support level, net Government removals of dairy products will remain large and could return to an upward trend.

*The authors thank Gerald Schluter for his many helpful comments.

The Model

The model used for this analysis, presented in the appendix, is a nine-equation aggregate quarterly model for the dairy sector (5). Stochastic equations are estimated for four key categories--milk cow inventories, production per cow, commercial use, and farm prices for milk. Model simulations conducted over the 1971-1981 estimation interval, as well as over the 1982-1983 beyond-sample interval, indicate very good model performance for these stochastic equations (5). Equations for production, marketings, total supply, net Government removals, and effective milk prices are identities, with net Government removals being the market-clearing equation. Farm use of milk, imports, and commercial stocks are exogenous supply and use variables and are determined outside the 9-equation model. The milk price deduction and the milk support price are exogenous policy variables, allowing alternative policy assumptions to be easily simulated.

The milk support price is the model's major policy instrument that has an impact. The level of support is the primary factor in determining milk prices, which in turn affect supply and demand. After adjusting farm-level milk prices for the deductions, the resulting effective milk prices affect producers' decisions regarding milk cow inventories and production per cow. When effective prices exceed total costs, expansion is expected to occur. When effective prices are below total costs, production is expected to decline, although in the short run, production may not fall if prices exceed variable costs (3). The support price also affects demand because commercial use is partly determined by the farm price of milk.

The Policy Scenarios

The three policy scenarios simulated assume alternative dairy price support levels through 1987 and are summarized in table 1.

Scenario 1: This scenario leaves the price support unchanged at $12.60 per cwt through calendar 1987.

Scenario 2: This scenario reduces the price support from $12.60 per cwt to $12.10 per cwt on April 1, 1985, and to $11.60 per cwt on July 1, 1985. This could occur if net Government removals are projected on April 1, 1985, to exceed 6 billion pounds over the following 12 months, and if they are projected on July 1, 1985, to exceed 5 billion pounds from July 1985 through June 1986. Support then remains unchanged through calendar 1987.

Table 1.--Alternative dairy price support scenarios

Time period	Dairy price support levels for		
	Scenario 1	Scenario 2	Scenario 3
	$/cwt		
1984-4	12.60	12.60	12.60
1985-1	12.60	12.60	12.60
1985-2	12.60	12.10	12.10
1985-3	12.60	11.60	11.60
1985-4	12.60	11.60	10.00
1986-1	12.60	11.60	10.00
1986-2	12.60	11.60	10.00
1986-3	12.60	11.60	10.00
1986-4	12.60	11.60	10.00
1987-1	12.60	11.60	10.00
1987-2	12.60	11.60	10.00
1987-3	12.60	11.60	10.00
1987-4	12.60	11.60	10.00

Scenario 3: This scenario assumes that after the two 50-cent-per-cwt price support reductions of scenario 2, a further reduction in support, to $10 per cwt, takes place on October 1, 1985, with support remaining at that level through the end of calendar 1987. This level of support is near likely total cash expenses per unit for the next few years if grain prices stay near their current levels, but is not high enough to cover total economic costs per unit. The results of scenario 3 are indicative of the effects of any future reductions in support below the $11.60 level simulated in scenario 2.

All scenarios were run from the fourth quarter of calendar 1984 through the fourth quarter of 1987. This allowed two quarters to be simulated identically by the model in each scenario before the different assumptions regarding the support level began and then allowed more than 2 years to be simulated under the alternative price support assumptions.

In each scenario, the 50-cent-per-cwt deduction on milk marketings ends on April 1, 1985, but the 15-cent-per-cwt deduction is assumed to remain in effect throughout the simulation period. Also, the exogenous imports, stocks, and farm use variables are assumed to follow typical seasonal patterns at constant levels through the simulation periods after the first quarter of 1985, when the diversion program ends. This was done to assure the neutrality of exogenous variable assumptions on the study results.

Results

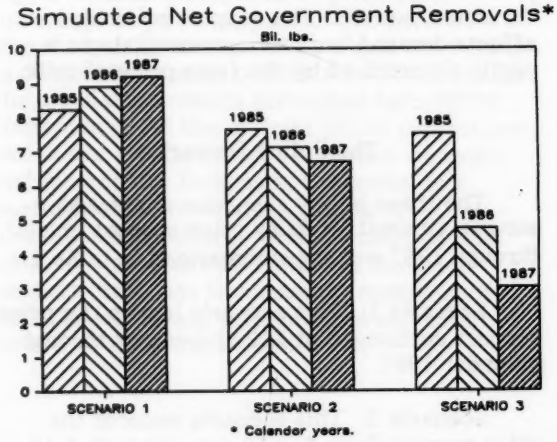
Table 2 contains the simulated values for six key dairy sector variables for the three scenarios. For scenario 1, with no price support change, milk cow inventories begin to rebuild, while production per cow rises throughout the simulation period.1/ Consequently, milk production increases. Commercial use also increases, but at a slower rate than does production, leading to a return to increasing net Government removals. Effective milk prices stabilize at about $13 per cwt each year of the simulation. The corresponding receipts per unit are above likely total economic costs, thereby providing the economic incentive for expansion.2/

For scenario 2, the two 50-cent-per-cwt reductions in support and the resulting lower effective prices slow the expansion in milk cow inventories and production per cow relative to the results of scenario 1. Nonetheless, both are still increasing, so production rises throughout the simulation period. Lower market prices lead to higher commercial use, with increases slightly higher than the production rises. While this results in net Government removals declining slowly, the basic supply/demand imbalance that remains leaves removals above 6 billion pounds in 1987. Although effective prices are substantially lower than in scenario 1, the corresponding receipts per unit remain above likely total economic costs, providing the economic incentive for the smaller expansion.

For scenario 3, milk cow inventories rise through the first half of 1986. However, a turning point occurs in the summer quarter of 1986, with inventories declining slightly from then through the end of the simulation period. Further, in contrast to the other two scenarios, production per cow declines in 1986 in response to the sharply lower effective prices. Although production per cow then rises through the end of the simulation, it stays near 1985 levels in 1987. Consequently, total production levels off at about 138 billion pounds a year. Lower market prices again cause increases in commercial use, resulting in a significant narrowing of the supply/demand imbalance and a substantial lowering of net Government removals.

Effective prices decline sharply in 1986, before increasing some in 1987. The corresponding receipts per unit fall below likely total economic costs in 1986, providing the economic incentive for the production decline. In 1987, receipts per unit remain

Simulated Net Government Removals*



1/ Because of seasonality present in the supply, utilization, and price data, comparisons are made on a 4-quarter-earlier basis.

2/ Although outside the framework of the model, the results can be embedded into the cost-of-production framework of references (2) and (4). To derive per unit receipts, the milk price deduction is added back to the effective price from the model and an assumed $1.10 to $1.20 per cwt is added to represent receipts from culled cows, calves, and replacements. Production cost projections for 1985-87 are based on historical data published in references (2) and (4), an assumed 4- to 5-percent general inflation rate, and assumed moderate changes in feed prices.

Table 2.--Selected dairy sector simulation results, 1984-4 through 1987-4

Time period	Milk cow inventories	Milk production per cow	Milk production	Commercial use	Net Govt. milk removals	Effective milk price
	1000 head	Lbs/cow	----------	Mil. lbs	----------	$/cwt
Scenario 1:						
1984-4	10,844	3,039	32,957	32,260	486	12.78
1985-1	10,858	3,129	33,971	30,277	2,429	12.84
1985-2	10,862	3,364	36,545	32,502	3,908	12.88
1985-3	10,897	3,167	34,515	33,820	1,055	12.96
1985-4	10,931	3,060	33,448	32,925	859	13.29
1986-1	10,945	3,158	34,564	30,948	3,196	13.32
1986-2	10,950	3,419	37,435	33,177	4,122	12.77
1986-3	10,978	3,207	35,211	34,554	1,017	12.93
1986-4	11,006	3,077	33,864	33,608	591	13.32
1987-1	11,020	3,188	35,135	31,370	3,345	13.25
1987-2	11,024	3,459	38,133	33,709	4,289	12.68
1987-3	11,050	3,241	35,807	35,129	1,038	12.88
1987-4	11,076	3,100	34,335	34,129	541	13.31
1984	10,846	12,540	135,987	126,111	8,561	12.67
1985	10,887	12,720	138,479	129,524	8,250	12.99
1986	10,970	12,861	141,073	132,287	8,925	13.08
1987	11,042	12,988	143,411	134,337	9,214	13.03
Scenario 2:						
1984-4	10,844	3,039	32,957	32,260	486	12.78
1985-1	10,858	3,129	33,971	30,277	2,429	12.84
1985-2	10,862	3,364	36,545	32,547	3,863	12.39
1985-3	10,891	3,156	34,377	33,896	840	12.10
1985-4	10,915	3,041	33,189	32,999	525	12.45
1986-1	10,920	3,139	34,277	31,027	2,830	12.42
1986-2	10,915	3,398	37,092	33,253	3,703	11.90
1986-3	10,932	3,182	34,791	34,620	531	12.15
1986-4	10,951	3,050	33,403	33,674	64	12.55
1987-1	10,957	3,162	34,643	31,440	2,782	12.41
1987-2	10,951	3,430	37,566	33,775	3,656	11.88
1987-3	10,968	3,210	35,211	35,188	383	12.16
1987-4	10,987	3,070	33,735	34,189	-119	12.57
1984	10,846	12,540	135,987	126,111	8,561	12.67
1985	10,882	12,690	138,082	129,720	7,657	12.45
1986	10,929	12,770	139,562	132,574	7,128	12.26
1987	10,966	12,873	141,154	134,593	6,701	12.26
Scenario 3:						
1984-4	10,844	3,039	32,957	32,260	486	12.78
1985-1	10,858	3,129	33,971	30,277	2,429	12.84
1985-2	10,862	3,364	36,545	32,547	3,863	12.39
1985-3	10,891	3,156	34,377	33,896	840	12.10
1985-4	10,915	3,041	33,189	33,130	395	10.98
1986-1	10,902	3,106	33,864	31,155	2,289	10.97
1986-2	10,881	3,366	36,622	33,376	3,111	10.49
1986-3	10,882	3,151	34,286	34,731	-84	10.86
1986-4	10,886	3,021	32,889	33,787	-563	11.23
1987-1	10,877	3,116	33,889	31,553	1,916	11.06
1987-2	10,856	3,384	36,735	33,883	2,717	10.58
1987-3	10,858	3,165	34,371	35,285	-554	10.97
1987-4	10,864	3,029	32,911	34,288	-1,042	11.35
1984	10,846	12,540	135,987	126,111	8,561	12.67
1985	10,882	12,690	138,082	129,850	7,527	12.08
1986	10,888	12,644	137,661	133,048	4,753	10.89
1987	10,864	12,695	137,906	135,010	3,036	10.99

below likely total economic costs and provide the economic incentive for the milk cow inventory reduction, although the rise in effective prices, the implicit culling of the least productive cows, and the herd's genetic improvement all contribute to an offsetting increase in production per cow.

Implications

The results of the three policy simulations conducted here suggest that milk cow inventories and production per cow will again lead to increases in milk production near or exceeding those in commercial disappearance unless price supports are substantially reduced. Consequently, in the absence of substantial price support reductions, net Government removals of dairy products would be expected to remain large and could begin trending upward again. Because a turning point in milk cow inventories and a stabilizing of output per cow are reached in the $10-per-cwt price support scenario, leading to a leveling off of production and consequently a decline in net Government removals, alternative support levels between $10 per cwt and $11.60 per cwt would also lead to declining removals. Such levels, however, would cause the narrowing of the supply/demand imbalance to occur more slowly than indicated in the $10-per-cwt scenario.

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APPENDIX

Quarterly dairy sector model

1. Milk cow inventory

$$COWKM = \underset{(994.52)}{0.993}\ COWKM_{t-1} + \underset{(8.81)}{11.70}\ MIPEFF_{t-1} - \underset{(3.96)}{0.261}\ SMPDM_{t-1}$$

$$- \underset{(3.35)}{24.79}\ DI - \underset{(4.44)}{32.67}\ D2$$

$R^2 = 0.997$ RMSE = 19.77 CV = 0.18 Estimation period = 1971-1981

2. Milk production per cow

$$MISPRPC = 1021.51 + \underset{(3.80)}{0.496}\ MISPRPC_{t-4} + \underset{(1.84)}{22.44}\ MIPEFF_{t-1} - \underset{(3.20)}{0.385}\ SMPDM_{t-1}$$

$$+ \underset{(1.15)}{15.35}\ GI + \underset{(1.71)}{28.95}\ DI + \underset{(3.50)}{174.05}\ D2 + \underset{(3.41)}{78.63}\ D3 - \underset{(3.44)}{68.26}\ D75$$

$R^2 = 0.982$ RMSE = 33.98 CV = 1.25 Estimation period = 1971-1981

3. Milk production

$$MISPR = (COWKM \cdot MISPRPC)/1000$$

4. Milk marketings

$$MISMRK = MISPR - MIUFR$$

5. Total supply of milk

$$MISST = MISMRK + MICITC + MISMT$$

6. Commercial milk use

$$MIUCM = 19474.22 - \underset{(1.21)}{29142.41}\ (MIPFM/CPI) + \underset{(6.58)}{1414.81}\ (Y/CPI)$$

$$+ \underset{(5.11)}{103.11}\ D2 \cdot TA + \underset{(8.18)}{164.29}\ D3 \cdot TA + \underset{(5.80)}{112.46}\ D4 \cdot TA$$

$R^2 = 0.852$ RMSE = 512.43 CV = 1.77 Estimation Period = 1971-1981

7. Net Government removals of milk

$$MICGVN = MISST - MIUCM - MICOTC$$

8. Milk price, farm

$$MIPFM = 3.89 + (\underset{(27.90)}{1.01}\ DI + \underset{(18.48)}{0.990}\ D2 + \underset{(18.50)}{0.921}\ D3 + \underset{(23.46)}{0.938}\ D4)\ MIPSP$$

$$- \underset{(4.92)}{0.312}\ (MISPR/1000) + \underset{(2.43)}{0.246}\ (MIUCM/1000)$$

$R^2 = 0.980$ RMSE = 0.39 CV = 4.13 Estimation period = 1971-1981

9. Effective milk price

$$MIPEFF = MIPFM - MIPDED$$

Quarterly dairy sector model variable definitions

Variables	Definition	Units
COWKM	Milk cow inventory 1/	Thousand head
CPI	Consumer price index 1/	1967=100
Di	Dummy variable equal to 1 in the i-th quarter, i = 1, 2, 3, 4	N.A.
D75	Dummy variable equal to 1 in 1975	N.A.
GI	Genetic improvement proxy--annual trend equal to 1 in 1966	N.A.
MICGVN	Net Government removals of milk 2/	Mil. lbs. 3/
MICITC	Beginning commercial milk stocks	Mil. lbs.
MICOTC	Ending commercial milk stocks	Mil. lbs.
MIPDED	Milk price deduction 1/	$/cwt.
MIPEFF	Effective milk price 1/	$/cwt.
MIPFM	Milk price, farm 1/	$/cwt.
MIPSP	Support price for milk 1/	$/cwt.
MISMRK	Milk marketings 2/	Mil. lbs.
MISMT	Milk imports 2/	Mil. lbs. 3/
MISPR	Milk production 2/	Mil. lbs.
MISPRPC	Milk production per cow 2/	Pounds
MISST	Total commercial milk supplies 2/	Mil. lbs.
MIUCM	Commercial disappearance of milk 2/	Mil. lbs. 3/
MIUFR	Farm use of milk 2/	Mil. lbs.
SMPDM	Soybean meal price, Decatur, 44% protein 1/	$/ton
TA	Annual trend equal to 1 in 1966	N.A.
Y	Personal disposable income, nominal 2/	Bil. dol.

N.A. = Not applicable.
1/ Average for the quarter.
2/ Sum for the quarter.
3/ Milk equivalent of products.

A Backward Glance 1/

This issue of the *Dairy Outlook and Situation* is the 400th in a series dating back to September 1931. The Dairy Situation was the first such report published by USDA. For more than half a century, the report has been a chronicle of the way the dairy industry has changed.

The readers of DS 1 represented a much different industry. About 5 million farms (three-fourths of all farms) kept at least one milk cow. One-fourth of farm milk production was used on farms, and half of the milk sold to plants and dealers was in the form of farm-separated cream. Dairy plants were small, typically operated by a family or local cooperative. There were 16 times as many butter plants and four times as many cheese plants as there are now. The output of 10 times as many commercial fluid milk plants was supplemented by at least 35,000 farmers selling fluid milk. Despite the large number of people directly involved in the industry, only three-fourths as much milk was produced in 1931 as in 1983 and just over half as much was marketed.

The report has also changed greatly. DS 1 contained 4 pages of text and 2 pages of data. The data available for analysis were much sparser, consisting primarily of prices, manufactured product output and stocks, and selected indicators of milk production. Even so, the *Dairy Situation* came out monthly.

The following excerpts from past issues give a taste of how the dairy industry reacted to wars, economic conditions, Government policies, and changes in the industry.

DS 1, September 1931

Milk production per cow...on August 1 of 13.92 pounds was 3.3 per cent less than the light production of a year ago and nearly 8 per cent less than the 5-year average....The poor condition of pastures and the low prices of dairy products which has tended to restrict feeding were important in curtailing the production per cow....The decline in general commodity prices during the last 2 years has been especially severe in the case of farm products. On August 15 the index number of prices paid producers for farm products was 75 as compared with 108 a year ago and 143 two years ago. The index number of the farm prices of dairy products...was 91.

DS 2, October 1931

During September the decline in feed prices continued and there was a further rise in butter and cheese prices. The abandonment of the gold standard by Great Britain and the depreciation in the pound sterling tended to lower the London exchange prices of dairy products as compared with American prices, and made the margin between domestic and foreign prices approximately equal to the tariff.

DS 70, June 17, 1937

During the last 2 weeks in May the Agricultural Adjustment Administration purchased 4,247 tubs of butter on the New York and Chicago Mercantile Exchanges. In the first 9 days of June purchases totaled 7,153 tubs... Butter is by far the most important manufactured dairy product. In recent years it has comprised about 80 percent of the total production of all manufactured dairy products on a milk equivalent basis. Since the 90's, however, the relative importance of butter has declined....In the last 45 years the relative importance of cheese has remained relatively stable at about 9 percent of the total.

DS 136, December 1942

The growing shortage of milk and dairy products...resulted in a series of orders...designed to curtail consumption....Manufacturers were required to set aside 70 percent of the spray-dried skim milk produced....The War Production Board froze half of the supply of butter in cold storage....Retail sales of...cream containing more than 19 percent butterfat were prohibited...milk solids used in ice cream...limited to 60 percent of that used in

1/ Compiled by James J. Miller, agricultural economist, Economic Research Service, USDA, (202) 447-8636.

October 1942. The total savings...might...amount to 4 or 5 billion pounds, milk equivalent. Since total demand for milk in 1943...is at least 20 billion pounds larger than the prospective supply, a further curtailment of civilian consumption will be necessary.

DS 193, June–July 1948

Numbers of cows have declined steadily since reaching the peak in mid–1944. Thus, the downtrend has continued about as long as during the 1930's following the 1934 drought...[but] has been greater....On January 1, 1948, there were 25,165,000 milk cows on farms, a reduction from a year earlier of 4 percent....Two developments have tended to offset the effects of smaller numbers of cows and lower rates of grain feeding on total milk output: (1) the average quality of cows in herds has been improved as lower producing animals were sold for beef, (2) farmers are milking a larger proportion of the milk cows on farms.

The strong consumer demand for fluid milk stems from the 12 percent increase in disposable income during the past year. Consumption of fluid milk and cream apparently has been running about the same as a year ago despite 13 percent higher retail prices....With prospects for continued strong consumer demand...prices of milk at the producer and consumer levels probably will be at or above present levels....Consumption of milk and cream per person in 1948 probably will be little different from the 1947 figure of 398 pounds.

DS 207, January 1950

On December 22, 1949, the Department of Agriculture announced a program to support prices received by farmers for manufacturing milk and butterfat...carrying out the provisions of the Agricultural Act of 1949, which requires that farm prices...be supported at levels between 75 percent and 90 percent of parity....As percentages of parity, however, the announced levels differ considerably from those in...December 31, 1949...[because of] two provisions in the Agricultural Act of 1949....One change consists of substitution of "adjusted base prices" for the actual average prices received...in 1910–14....The second change...is the inclusion of wages of hired labor in the parity index....The announced objective of $3.07 per hundred pounds is about 79 percent of the parity equivalent for manufacturing milk....In terms of parity as previously computed, $3.07 per hundred pounds is 90 percent.

DS 263, December 1957

Substantial changes in volume of U.S. production of manufactured dairy products, coupled with the increase in fluid milk use in most areas, have had some interesting effects on...some of the major products. One of the more striking changes is the reduction in amount of milk used in making creamery butter. In 1930 about 33 billion pounds of milk was used...but in 1955 the total was down to 27.5 billion....The West North Central States have been consistently the largest producers...51 percent of the U.S. output in 1935 and 1940, 54–56 percent in the last decade....The biggest change in regional importance occurred for the Western States, dropping from 13.5 percent of U.S. butter output in 1930 to 9.3 percent in 1955. For cheese, the total quantity of milk used increased from 5 billion pounds in 1930 to over 13 billion in 1955. The East North Central States continued to produce over half the U.S. total...though the proportion dropped from 70 percent in 1930 to 60 percent in 1955....The West North Central gained the 10 points lost by the East North Central group.

DS 289, April 1962

The Secretary of Agriculture announced that the price support for milk and butterfat would be dropped to 75 percent of parity on April 1. This results in a price support level of $3.11 per hundredweight for manufacturing milk...a drop of 29 cents....Rising production and declining per capita milk and dairy product consumption, along with near–record CCC purchases in the 1961–62 marketing year, indicate that supplies will continue to exceed consumption in 1962–63, even at the lower support price....In the 1961–62 marketing year as a whole, CCC purchased 11.1 billion pounds of milk equivalent...only 0.3 billion pounds less than the record year 1953–54, and 8.8 percent of production.

DS 324, March 1969

The marketing and supply areas covered by Federal milk orders expanded in 1968, but the number of orders was down to 66 on January 1, 1969....Expansion of marketing areas occurred in the Chattanooga, North Texas, and Upper Chesapeake Bay orders, and through the initiation of a new order for South Texas. Merging 13 orders into 4 reduced the number of orders....A new order has been approved covering most of Georgia....Decisions have been issued for a new order...in southeastern Minnesota and northern Iowa, and to expand the Minneapolis–St. Paul marketing area....A hearing has been held on a proposed new order covering portions of Oregon and Washington....Minimum Class I prices...averaged $6.17 per 100 pounds in 1968, up from $5.85 a year earlier. The rise resulted from...the Class I differential increase initiated in 1967 and [higher] minimum level of the Minnesota–Wisconsin price used in the Class I price formulas.

DS 351, July 1974

Wholesale dairy prices came tumbling down starting in early April. The wholesale price index...read 146.9 in May, 5 percent under the April average....Wholesale prices of butter, American cheese, and nonfat dry milk have nosedived to CCC's support purchase levels....Wholesale prices...had risen substantially since last summer...about a fifth from July 1973 to March this year. The very tight dairy supply–demand situation caused the fast price rise. But that situation started to come apart this spring and summer....Fluid sales dropped....Real spendable earnings of consumers declined....Cheese supplies rose sharply....Milk production was expanding seasonally....Supplies of dairy products have expanded faster than sales, causing a sharp buildup in commercial stocks....Farm prices of milk took a sharper than normal seasonal drop this summer....These large seasonal changes started last year when prices rose very sharply late in the year with manufacturing milk prices climbing above 100 percent of parity.

DS 374, March 1979

Milk production in 1978 totaled 121.9 billion pounds, down slightly from 1977's 122.7 billion pounds. Last year's output was shaped by two atypical patterns. Milk cow numbers dropped sharply during the first half of 1978 but increased during the rest of the year. Secondly, output per cow posted an unusually small increase, even though milk–feed price relationships stayed favorable....The second–half increase was the first time in a quarter of a century that cow numbers rose over a 6–month period....For all of 1978, milk production per cow was just a half–percent higher than the previous year....In 1978, there were about 380,000 operations with milk cows....Operations with less than 30 cows accounted for 65 percent of all operations...[but] held only 16 percent of the milk cow inventory....Only 17 percent of the operations had 50 or more milk cows, but this group held 60 percent of the total milk cows.

DS 396, March 1984

Milk production during calendar 1983 was nearly 140 billion pounds, up 4.2 billion (3.1 percent) from the 1982 record....Each month of 1983 posted a year–over–year expansion....Commercial disappearance...was weak during most of 1983....USDA net removals under the milk price support program were a record 16.8 billion pounds.

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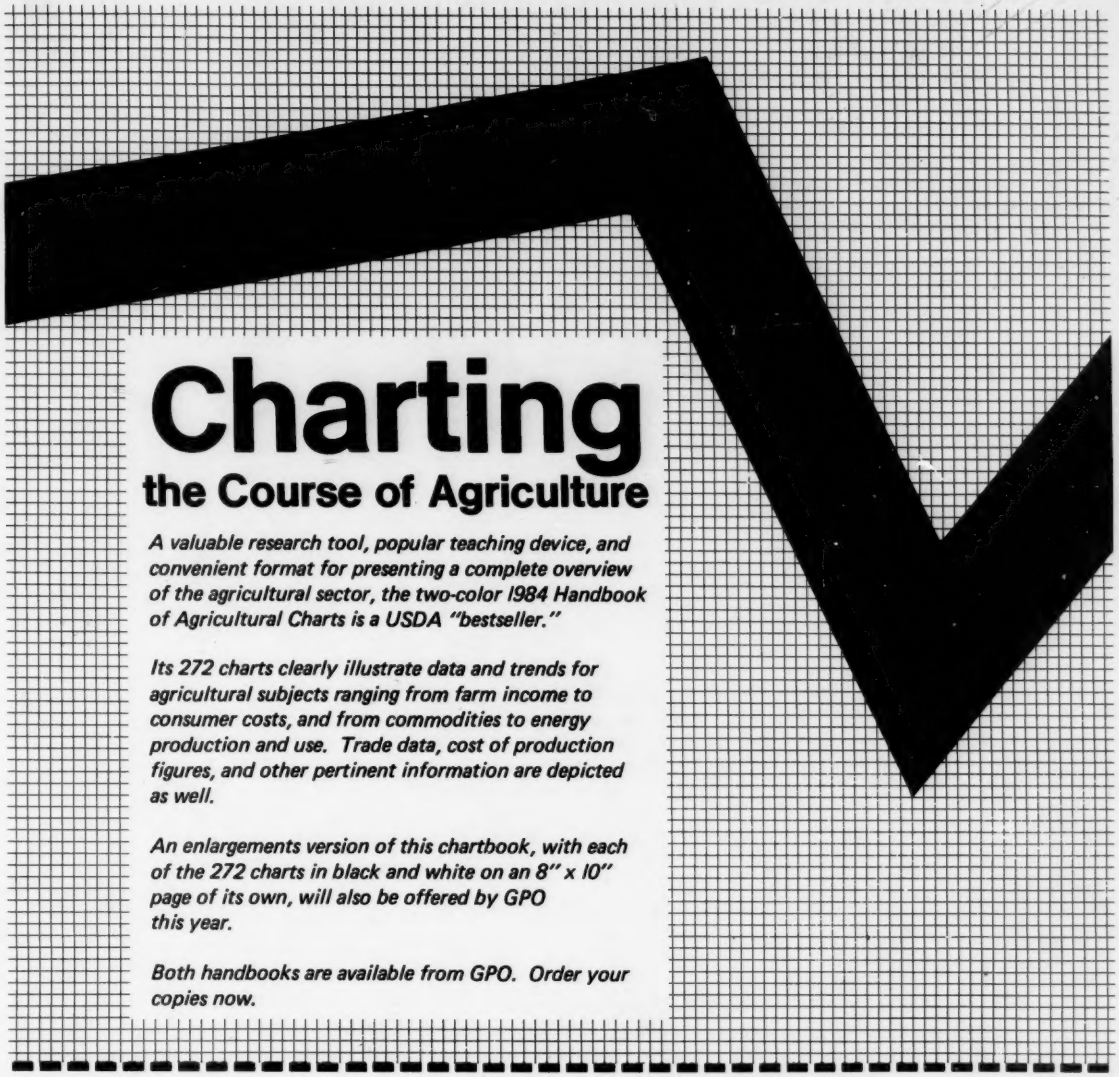

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